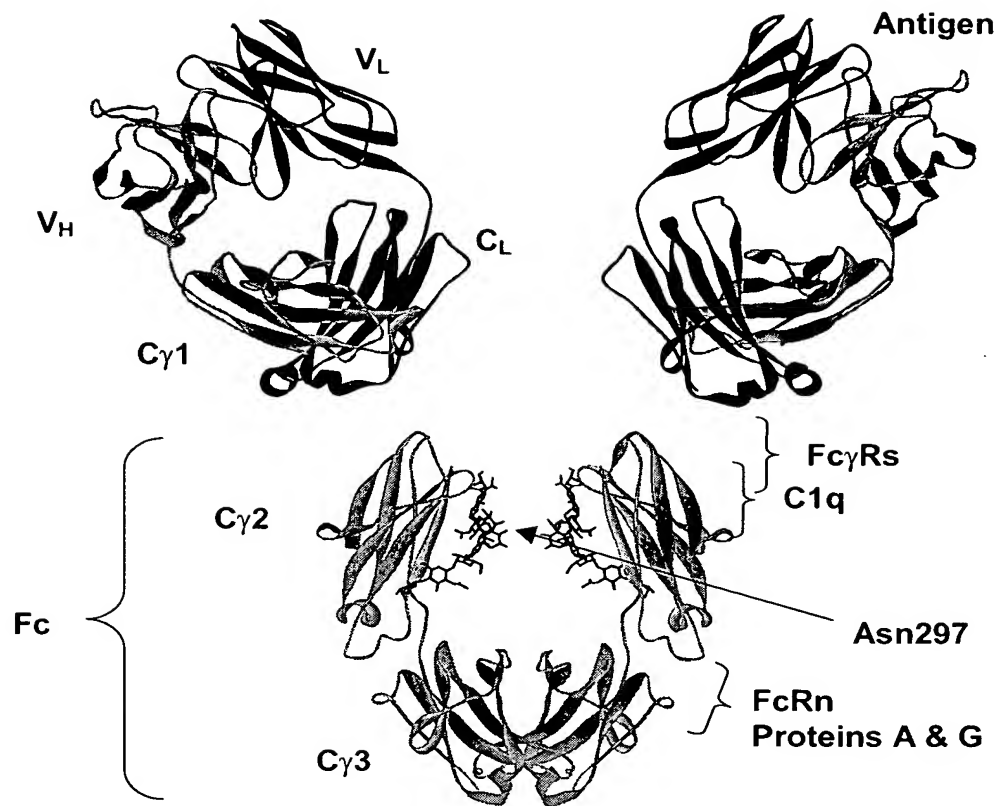


Figure 1



2

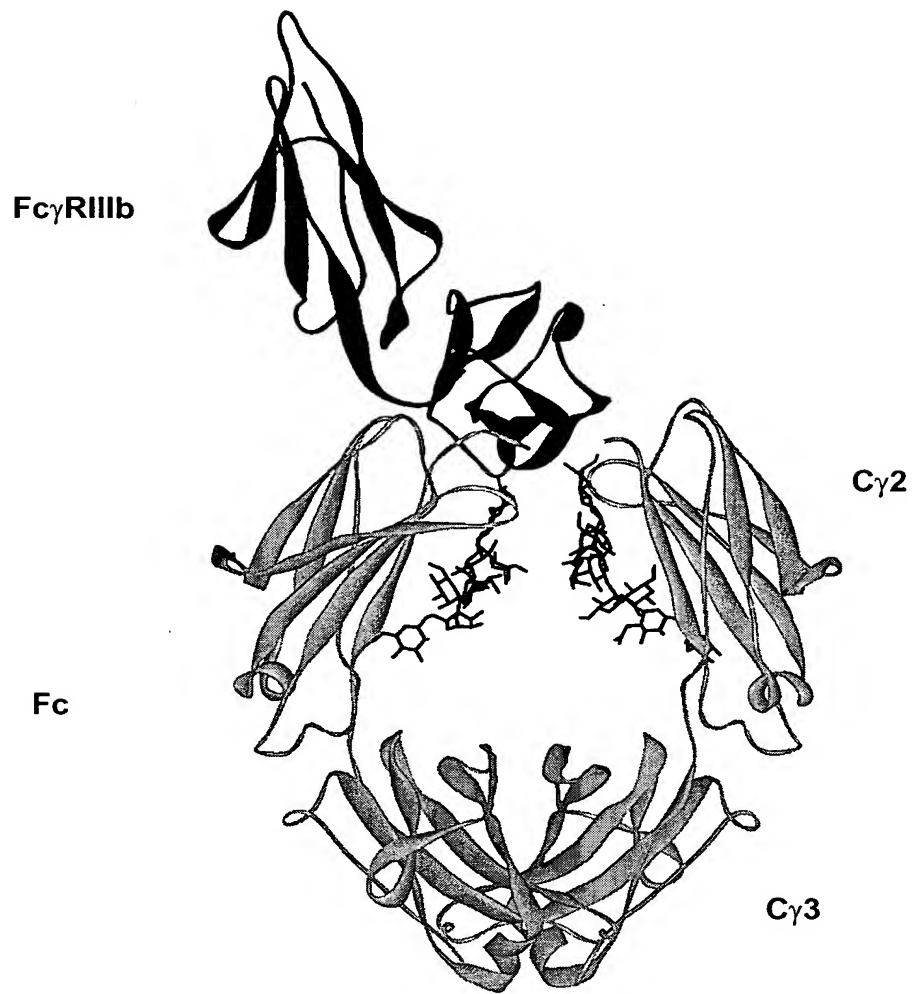


Figure 3

VH1->

1	10	20	30	40	50	60
123456789012345678901234567890123456789012345678901234567890						
QVQLQESGPGLVRRPSQTLSTCTVSGFTFTDFYMNWVRQPPGRGLEWIGFIRDKAKGYTT						

70	80	90	100	110	120
123456789012345678901234567890123456789012345678901234567890					
EYNPSVKGRVTMLVDTSKNQFSLRLSSVTAADTAVYYCAREGHTAAPFDYWGQGSGLVTVS					

Cy1->

130	140	150	160	170	180
123456789012345678901234567890123456789012345678901234567890					
SASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS					

HINGE->

190	200	210	220	230	240
123456789012345678901234567890123456789012345678901234567890					
SGLYSLSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPEL					

1234567890123456

KABAT	22	23
-------	----	----

Cy2->

250	260	270	280	290	300
123456789012345678901234567890123456789012345678901234567890					
GPSVFLFPPKPKDITLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQY					

789012345678901234567890123456789012345678901234567890123456

240	250	260	270	280	290
-----	-----	-----	-----	-----	-----

?Cy3?->

310	320	330	340	350	360
123456789012345678901234567890123456789012345678901234567890					
NSTYRVVSVLTVQLHQLDNLGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRD					

789012345678901234567890123456789012345678901234567890123456

300	310	320	330	340	350
-----	-----	-----	-----	-----	-----

370	380	390	400	410	420
123456789012345678901234567890123456789012345678901234567890					
ELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR					

789012345678901234567890123456789012345678901234567890123456

360	370	380	390	400	410
-----	-----	-----	-----	-----	-----

430	440	450
1234567890123456789012345678901		
WQQGNVFSCSVMHEALHNHYTQKSLSLSPGK		

7890123456789012345678901234567

420	430	440
-----	-----	-----

Figure 4

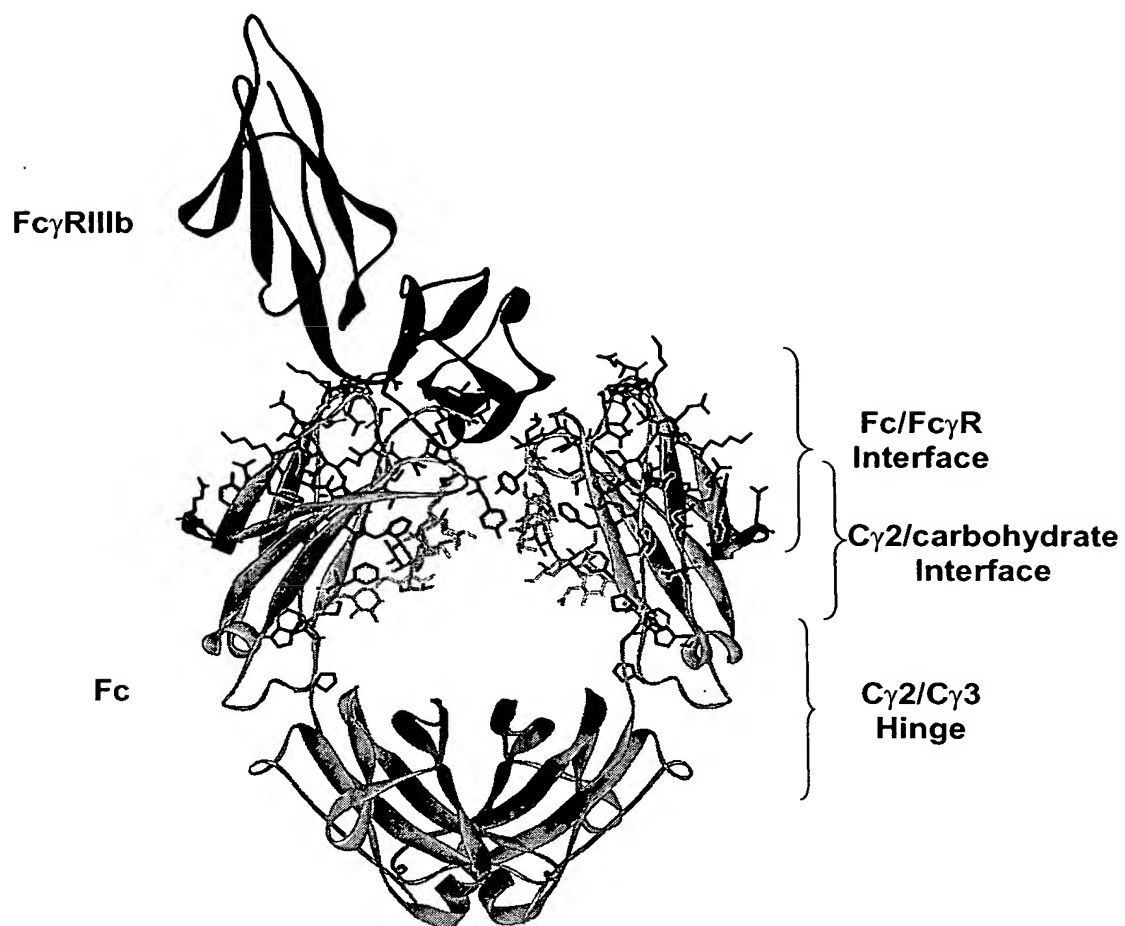


Figure 5

22 23 24 25 26 27 28
123456789012345678901234567890123456789012345678901234567890
DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD

29 30 31 32 33 34
123456789012345678901234567890123456789012345678901234567890
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAK

35 36 37 38 39 40
123456789012345678901234567890123456789012345678901234567890
GQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTTPVLD

41 42 43 44
123456789012345678901234567890123456789012345678901234567
DGSFFLYSKLTVDKSRWQQGNVFSVSMHEALHNHYTQKSLSLSPGK

Figure 6

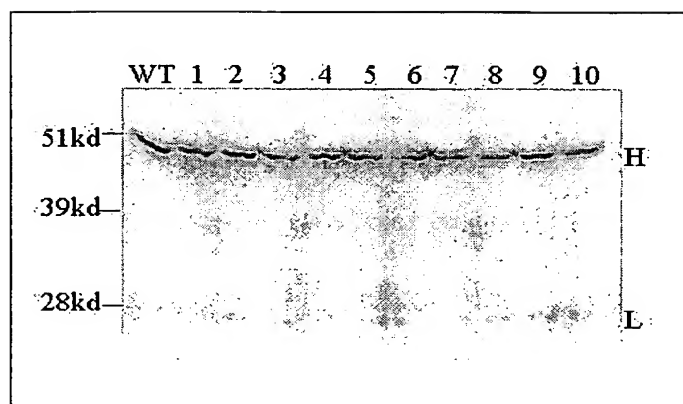


Figure 7

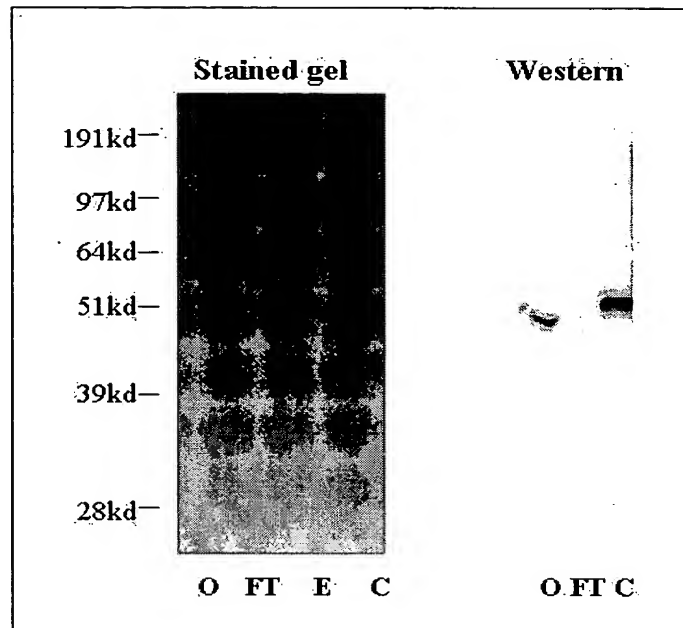


Figure 8

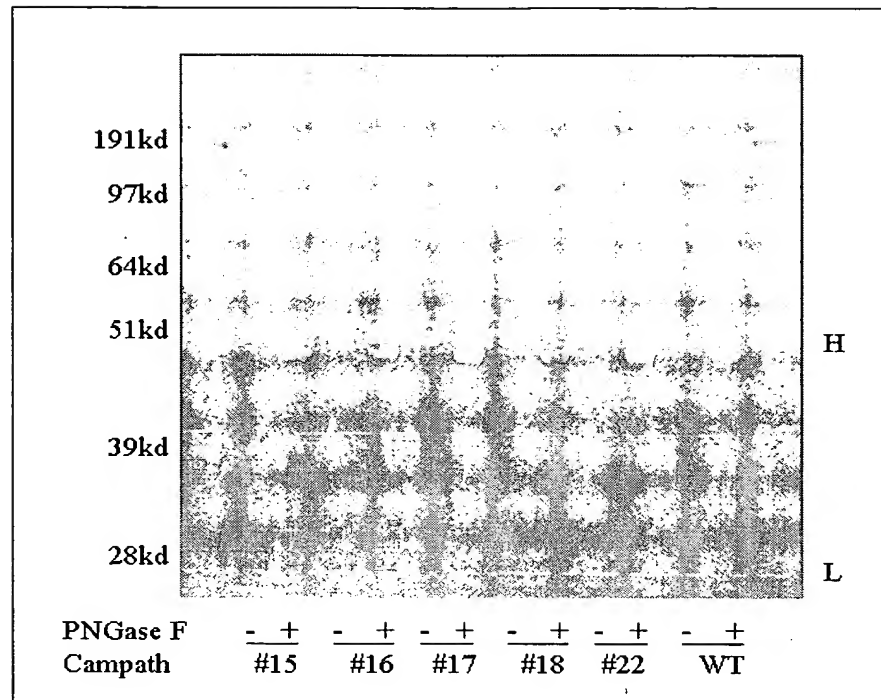


Figure 9

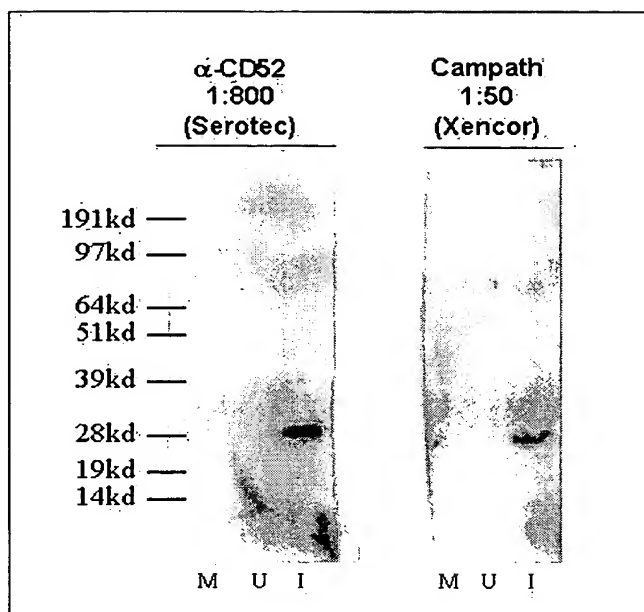


Figure 10

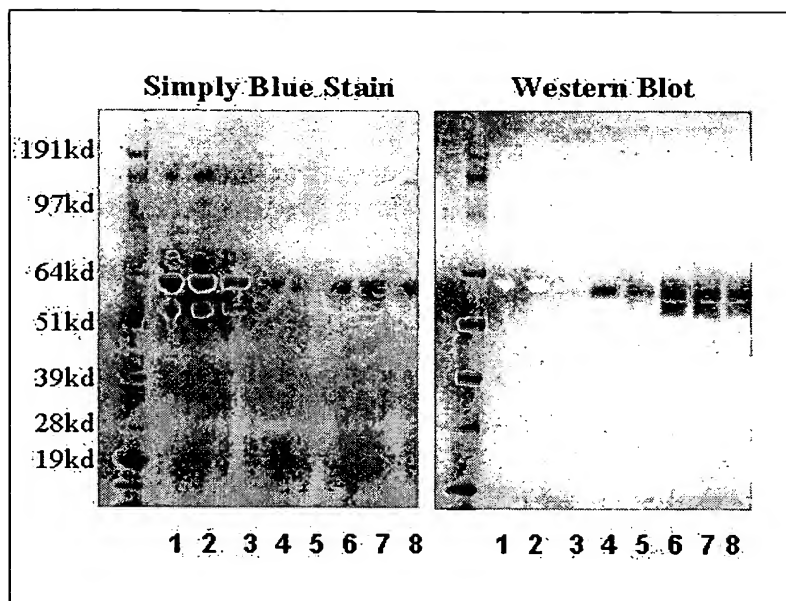


Figure 11

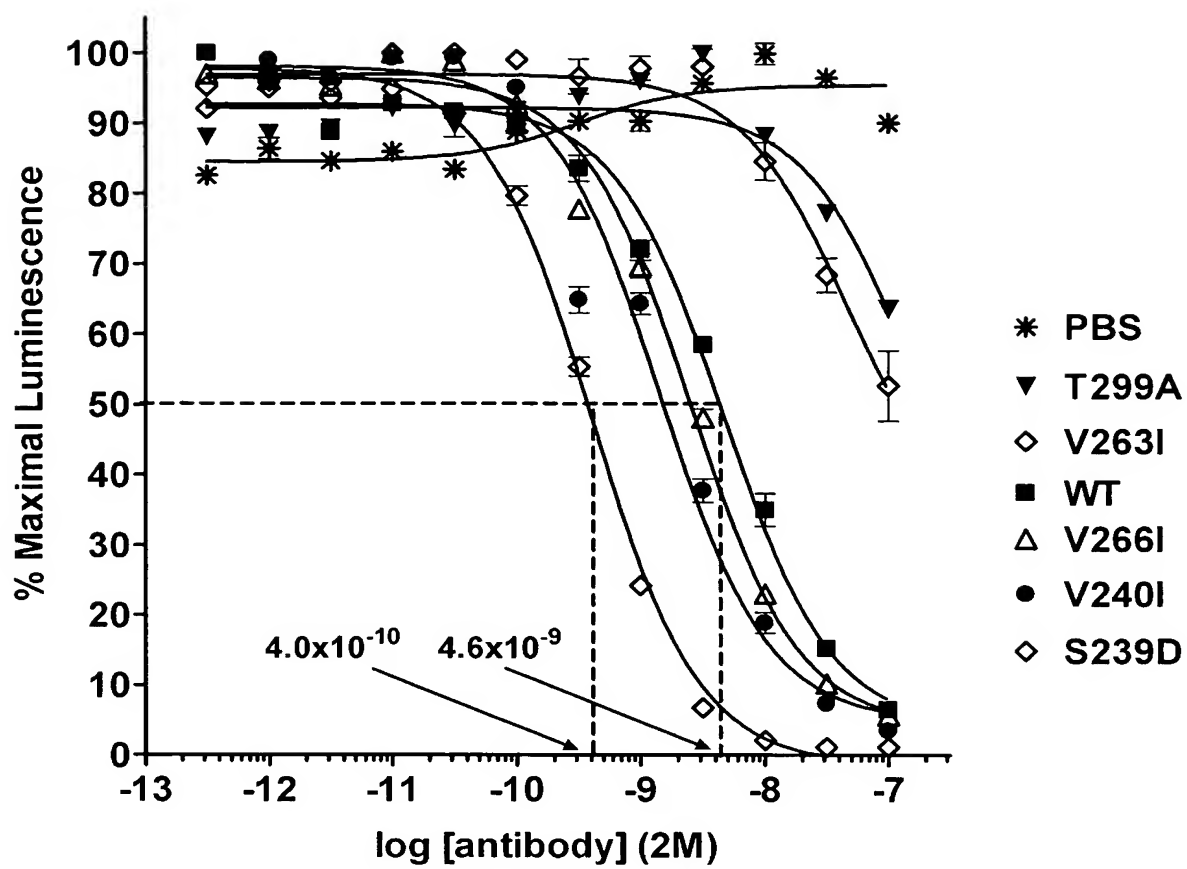


Figure 12

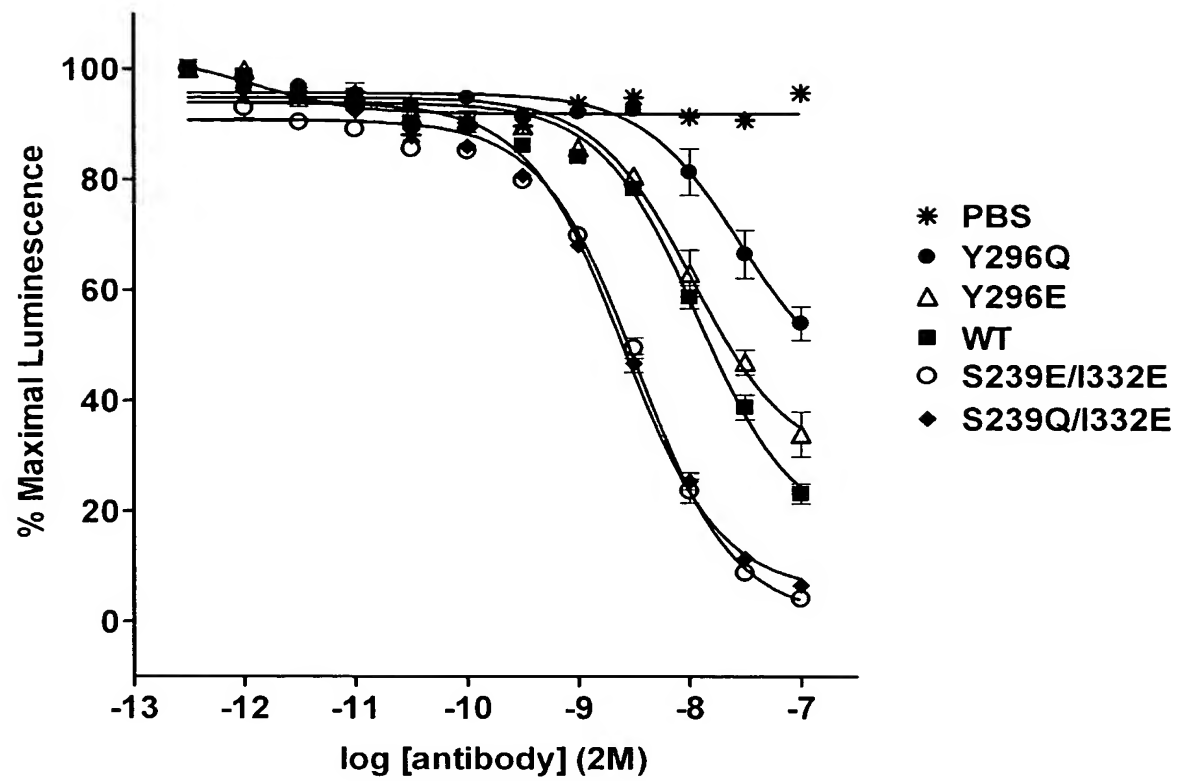


Figure 13a

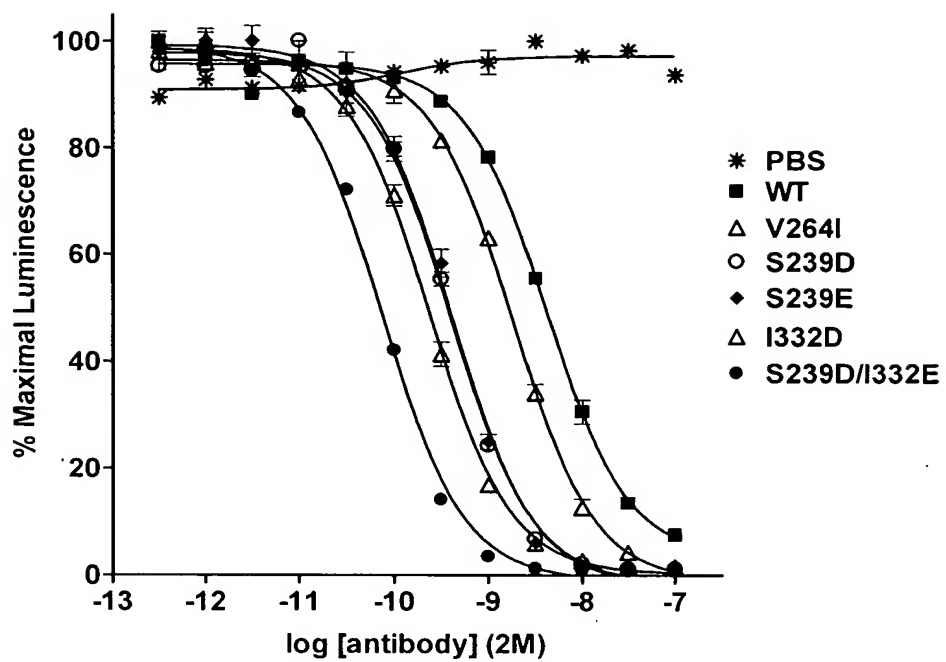


Figure 13b

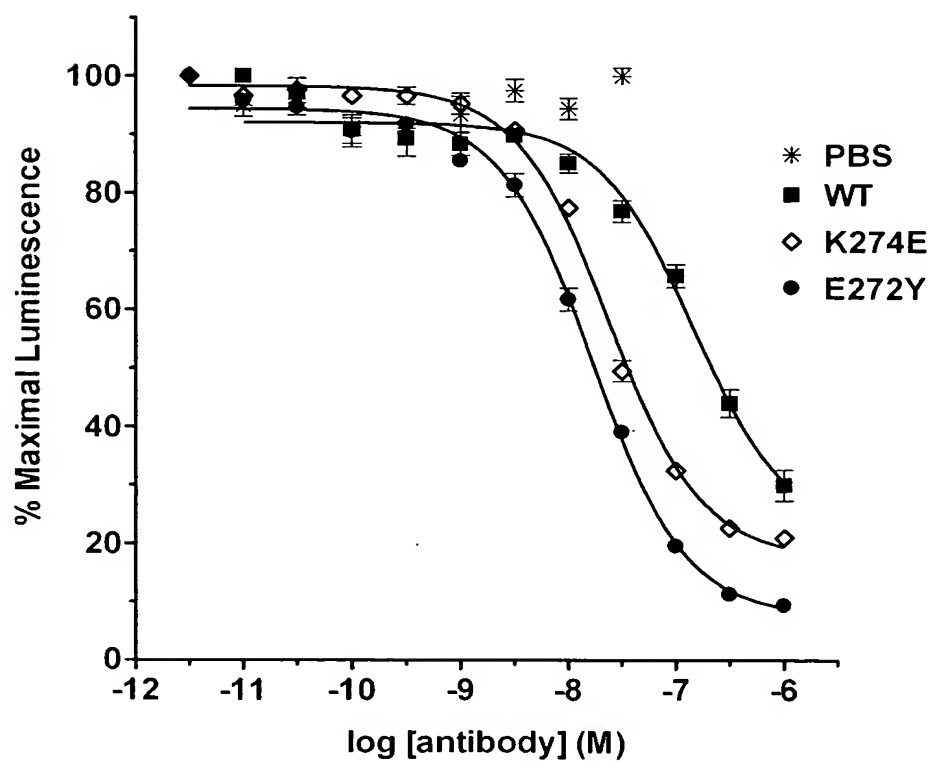


Figure 14a

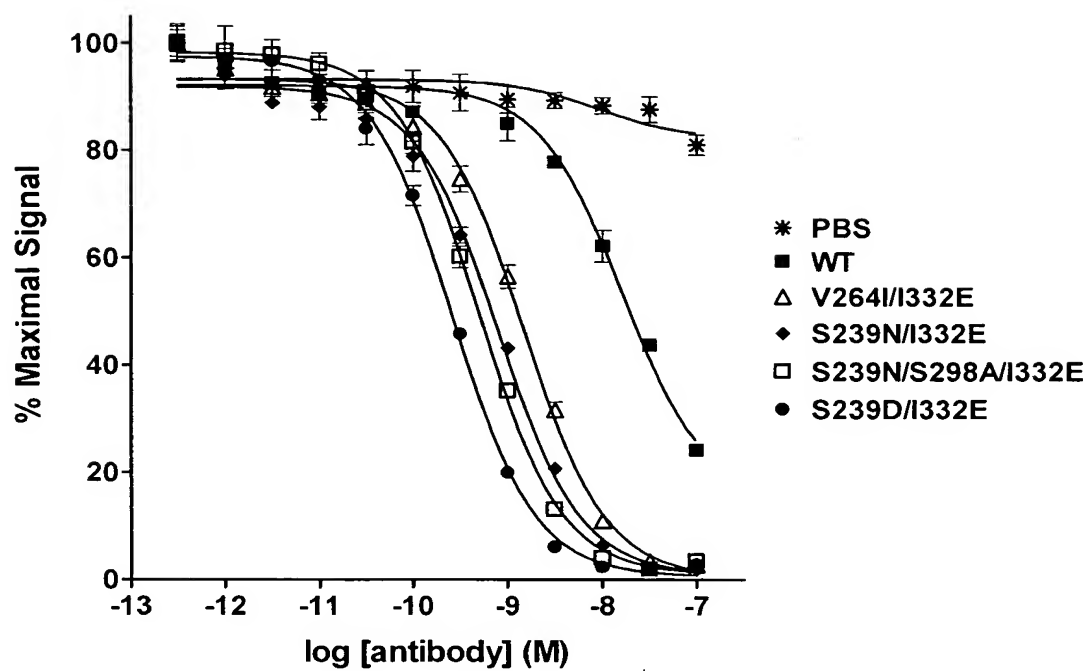


Figure 14b

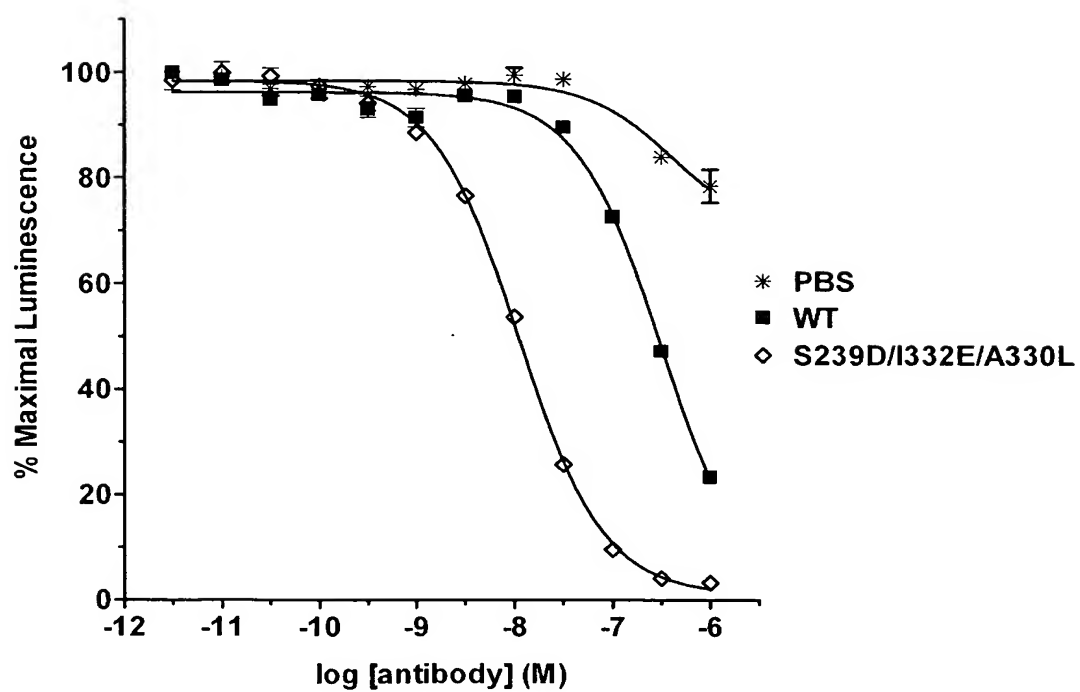


Figure 15a

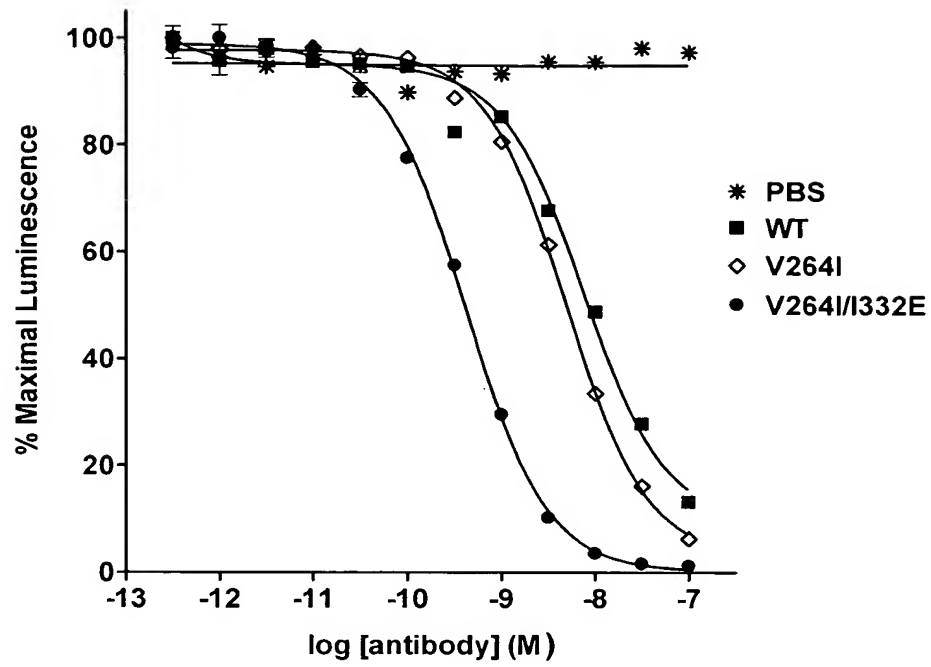


Figure 15b

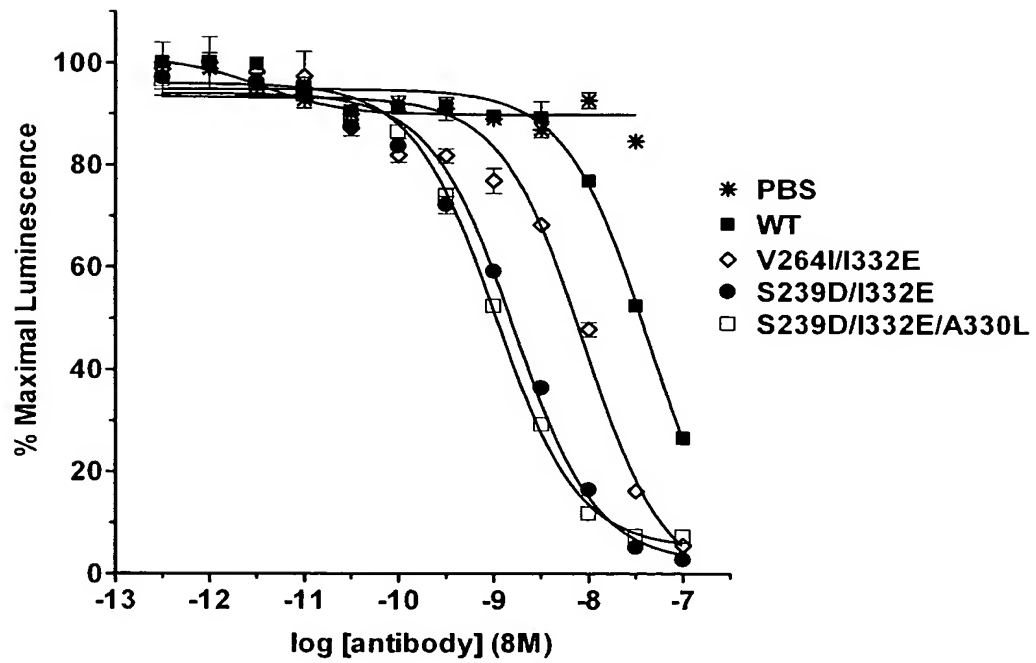


Figure 16a

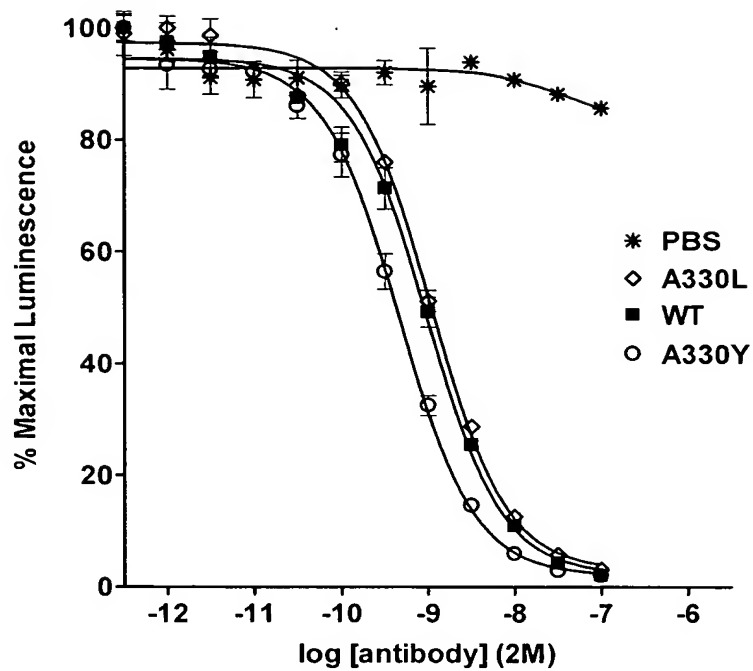


Figure 16b

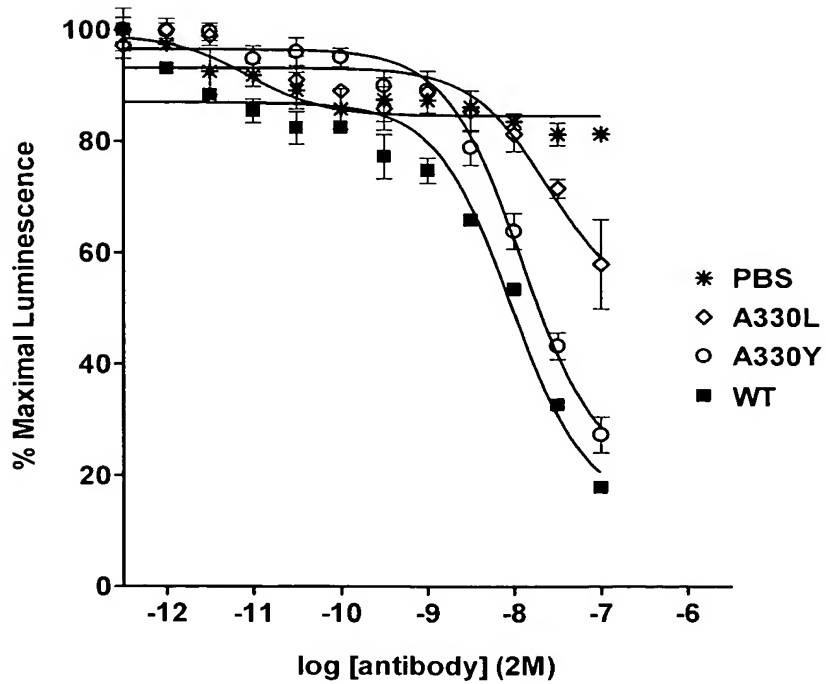


Figure 17

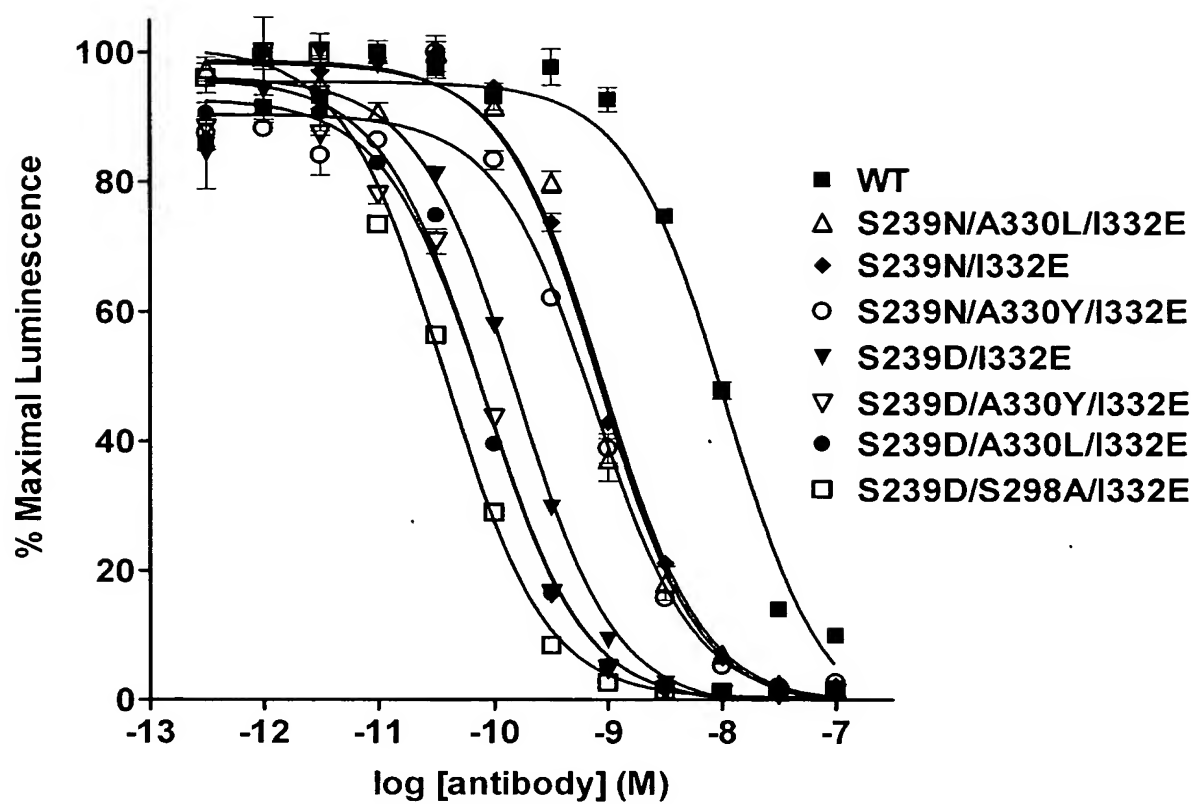


Figure 18

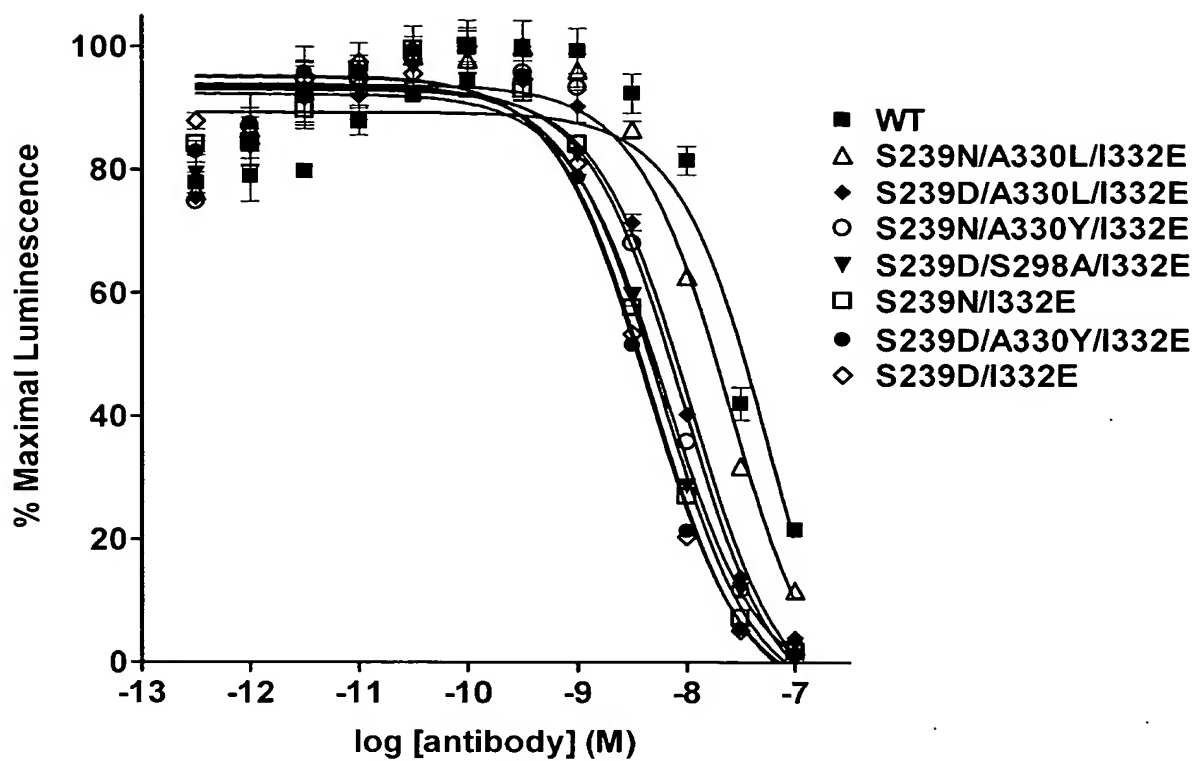


Figure 19a

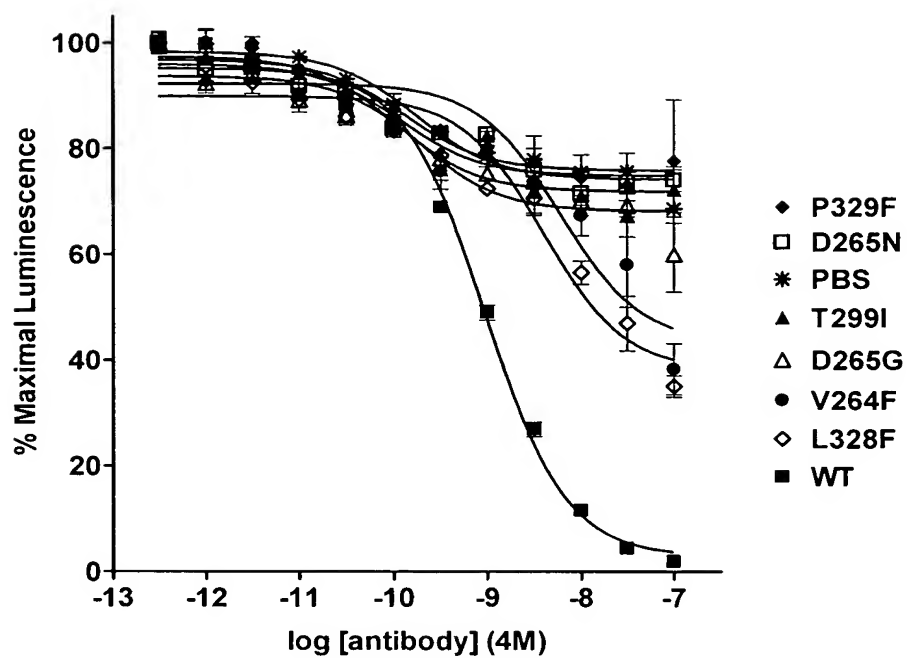


Figure 19b

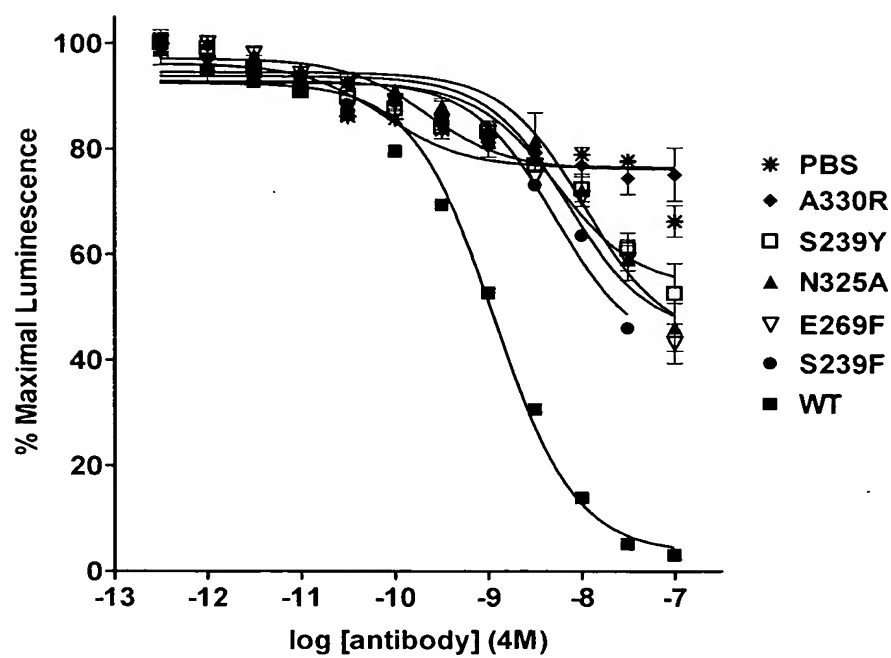


Figure 20

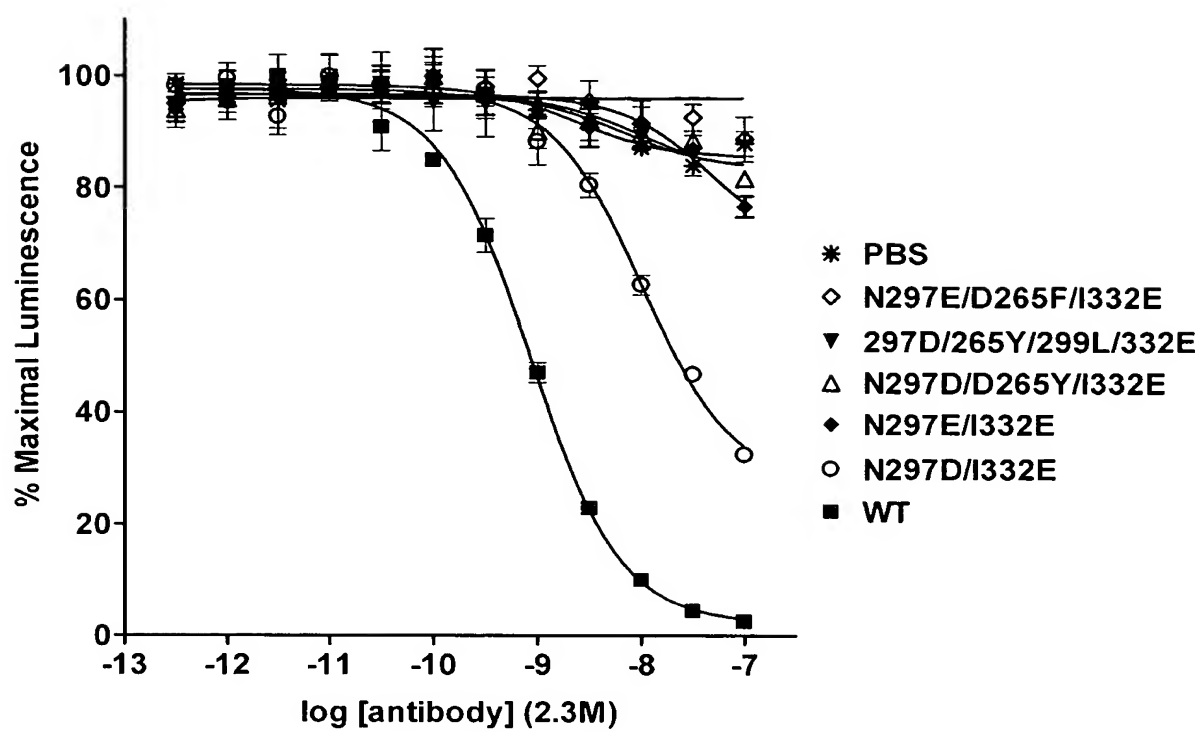


Figure 21

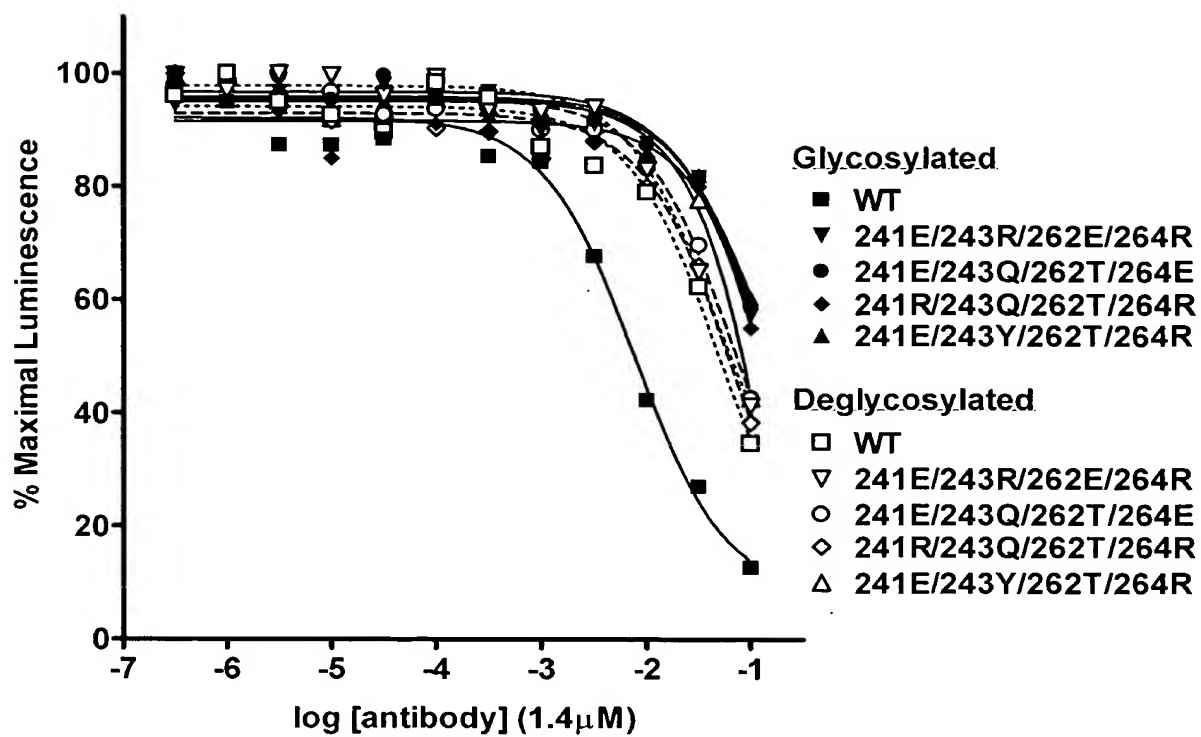


Figure 22a

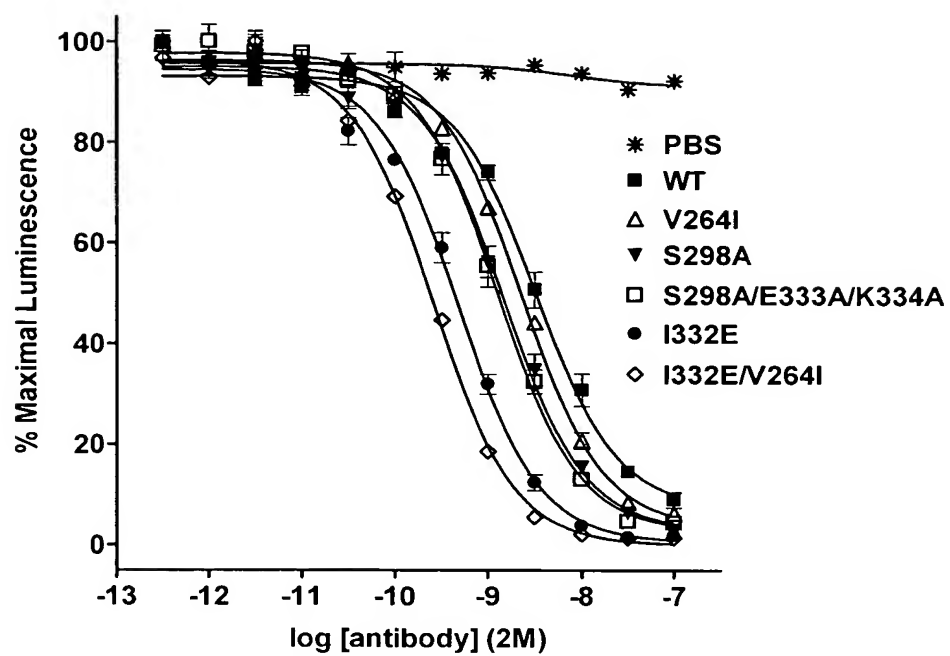


Figure 22b

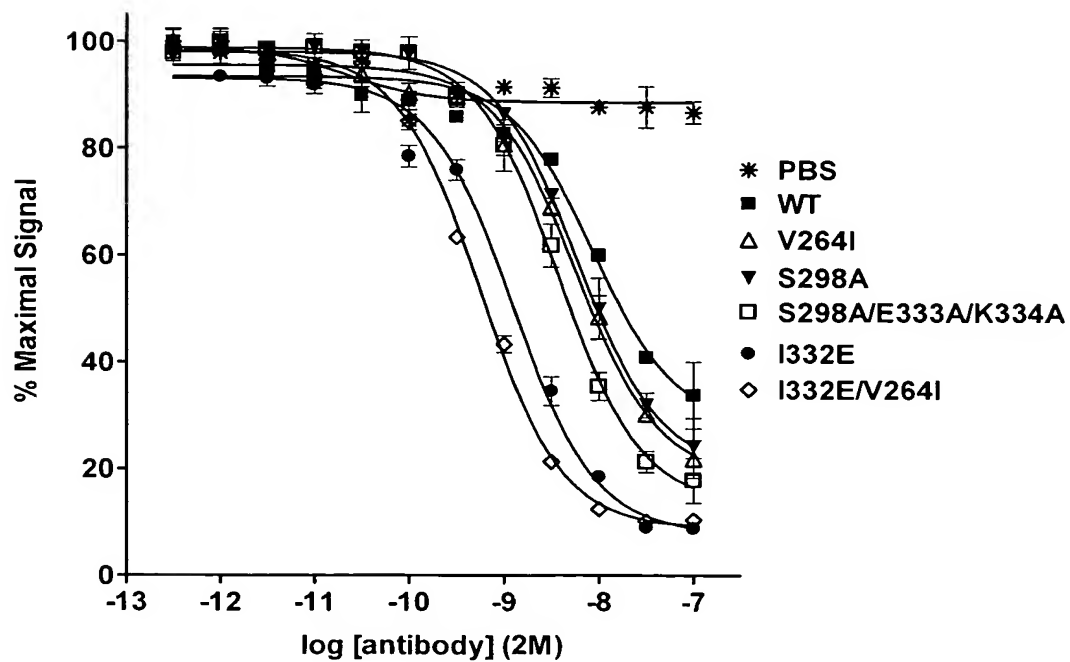


Figure 23a

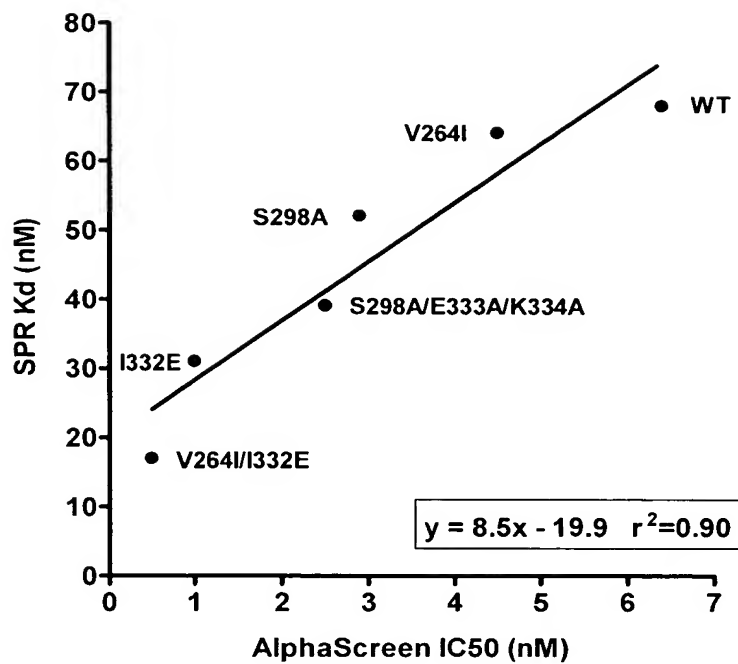


Figure 23b

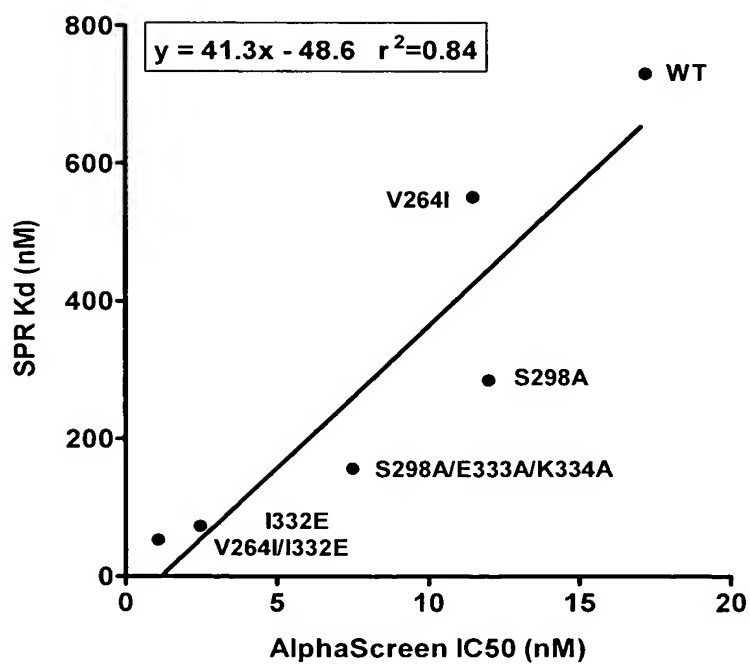


Figure 23c

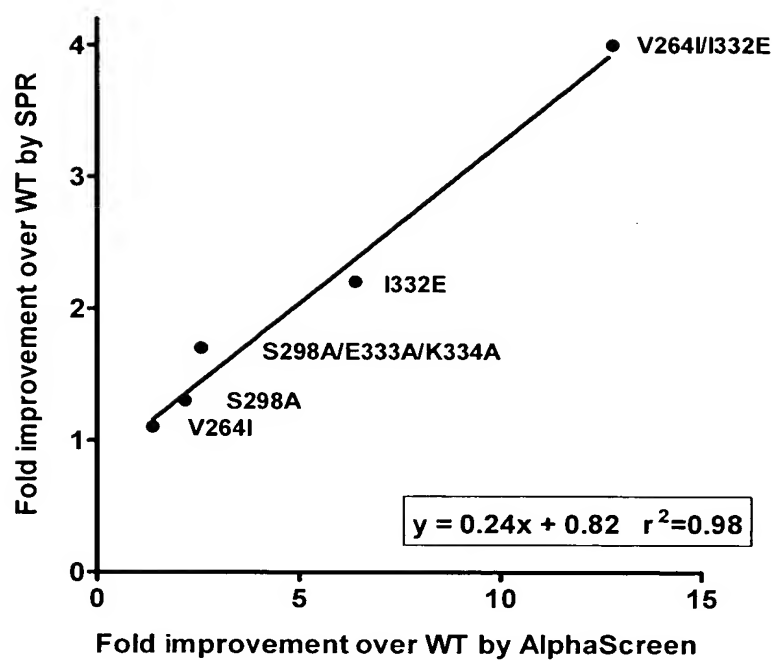


Figure 23d

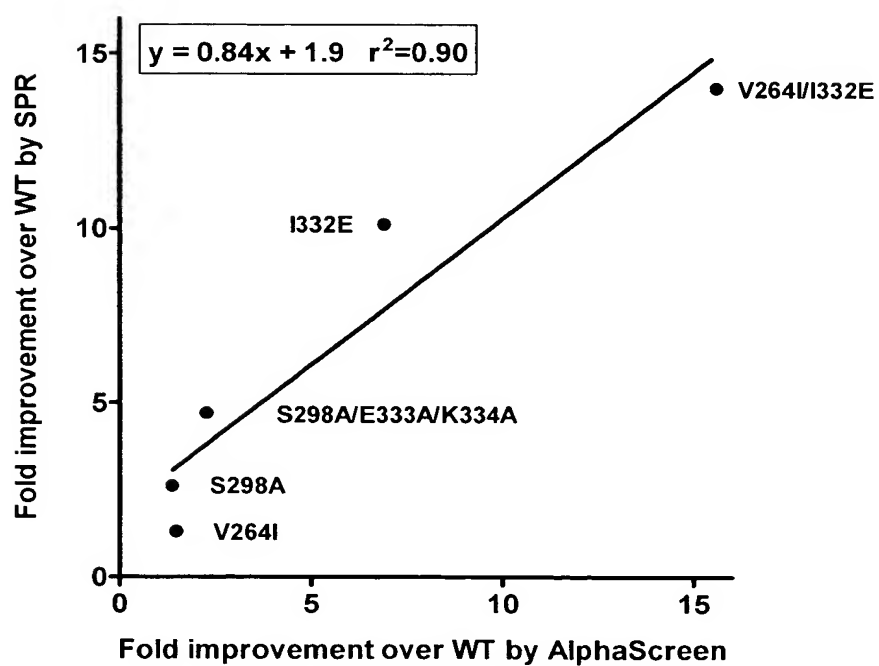


Figure 24a

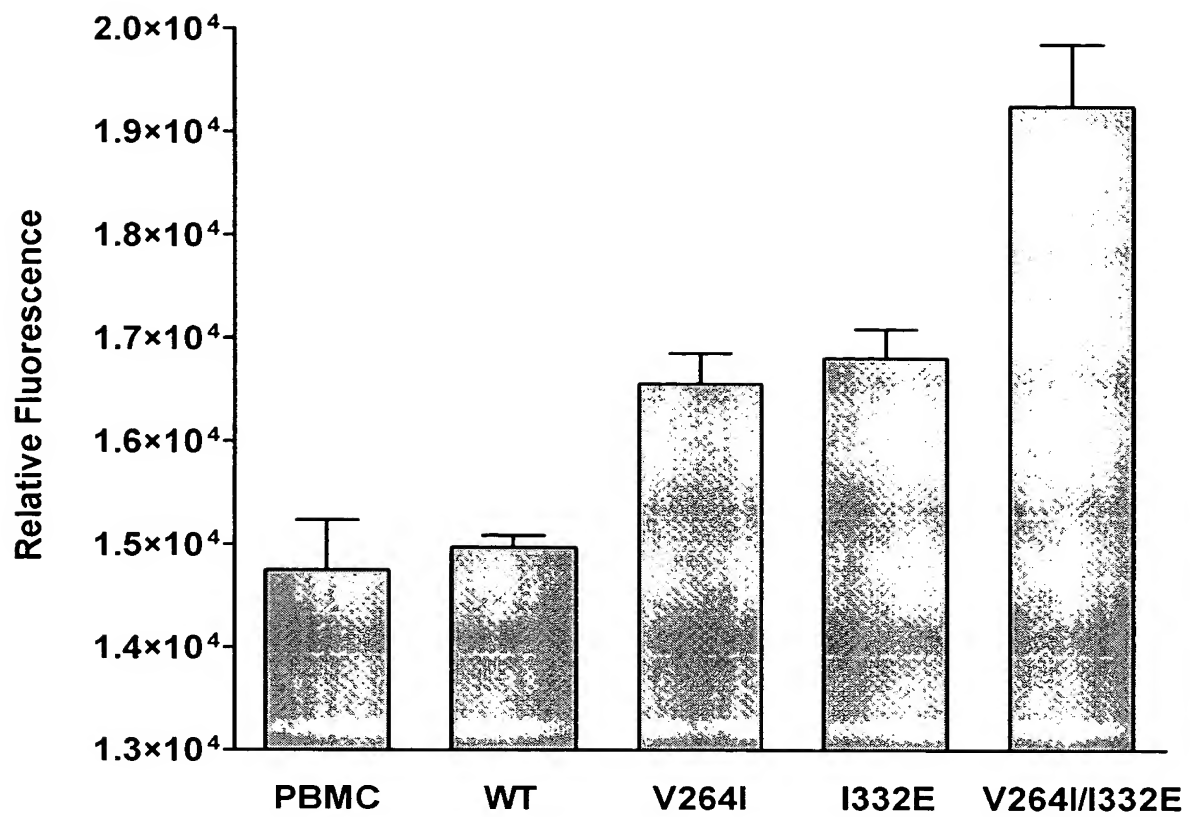


Figure 24b

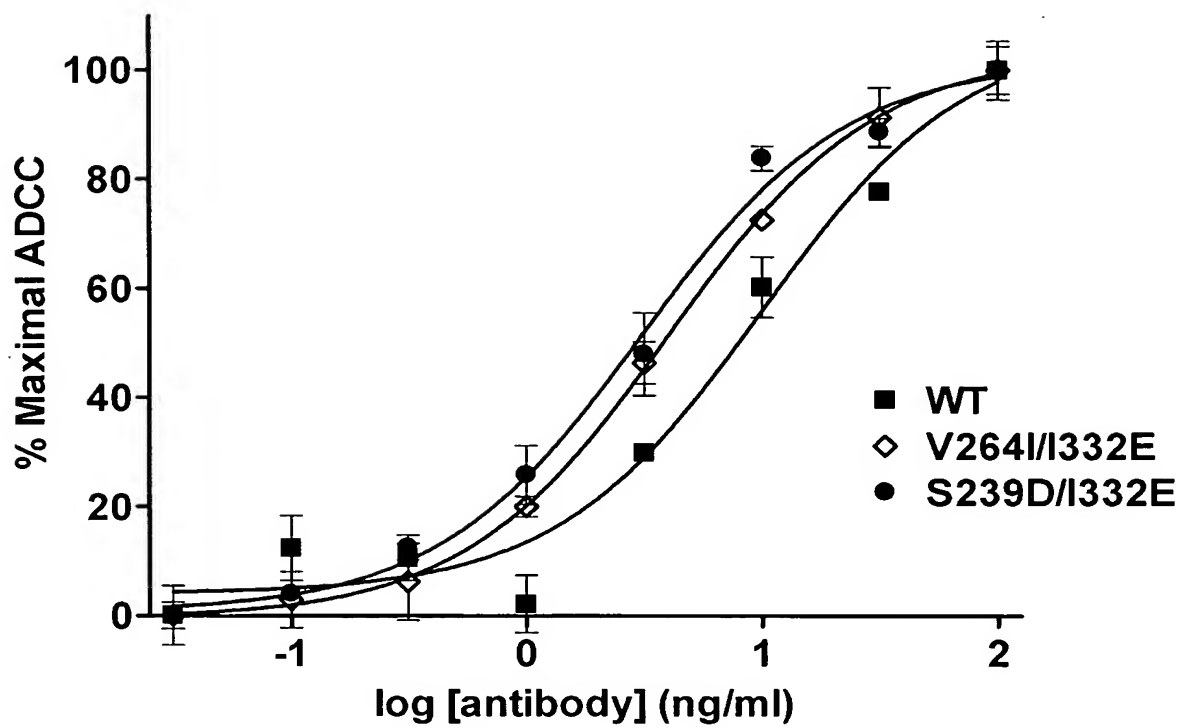


Figure 25a

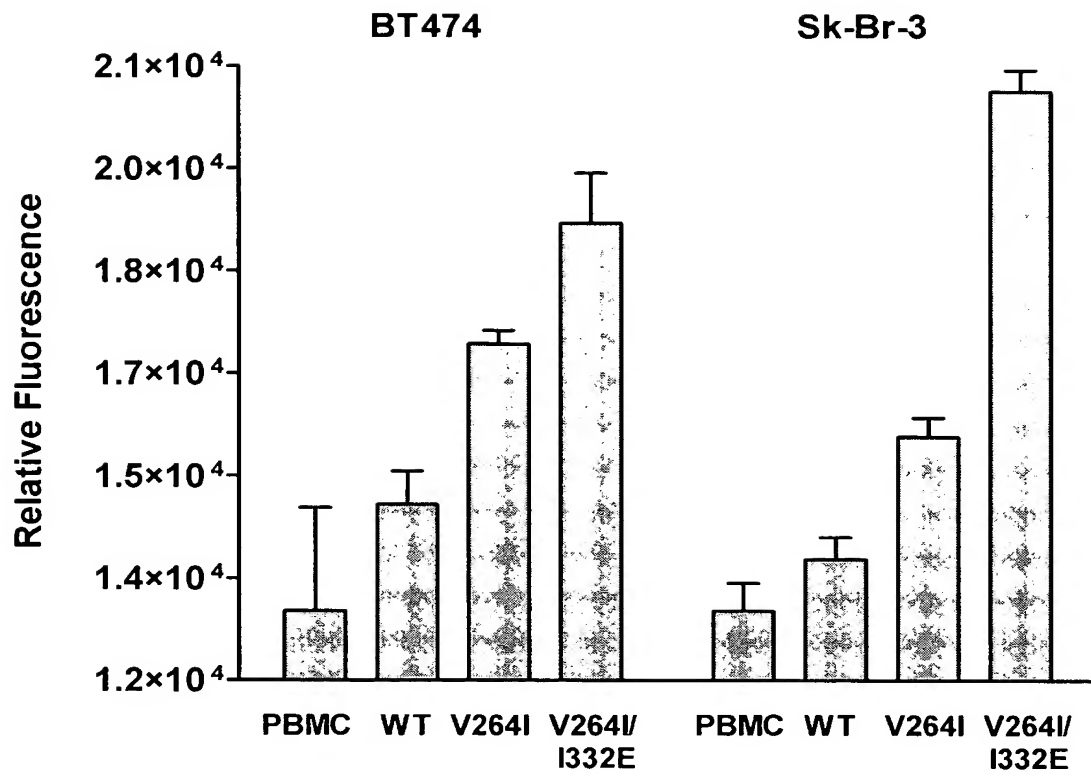


Figure 25b

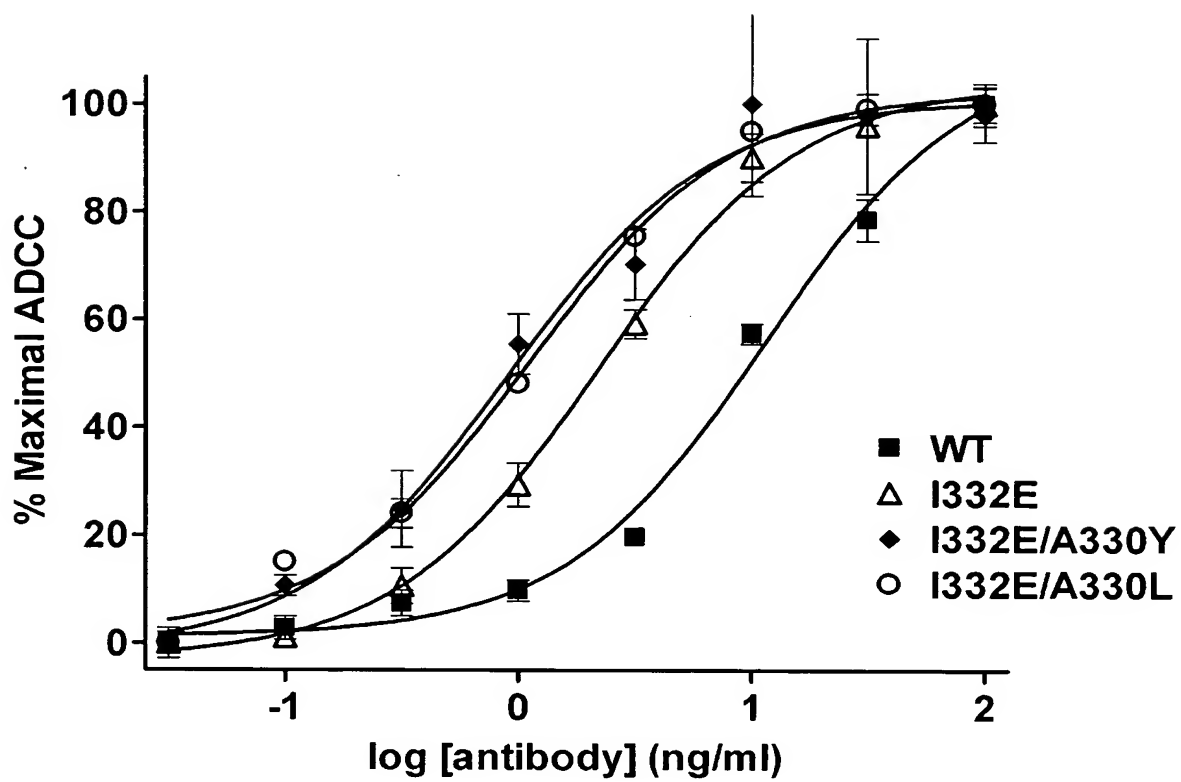


Figure 25c

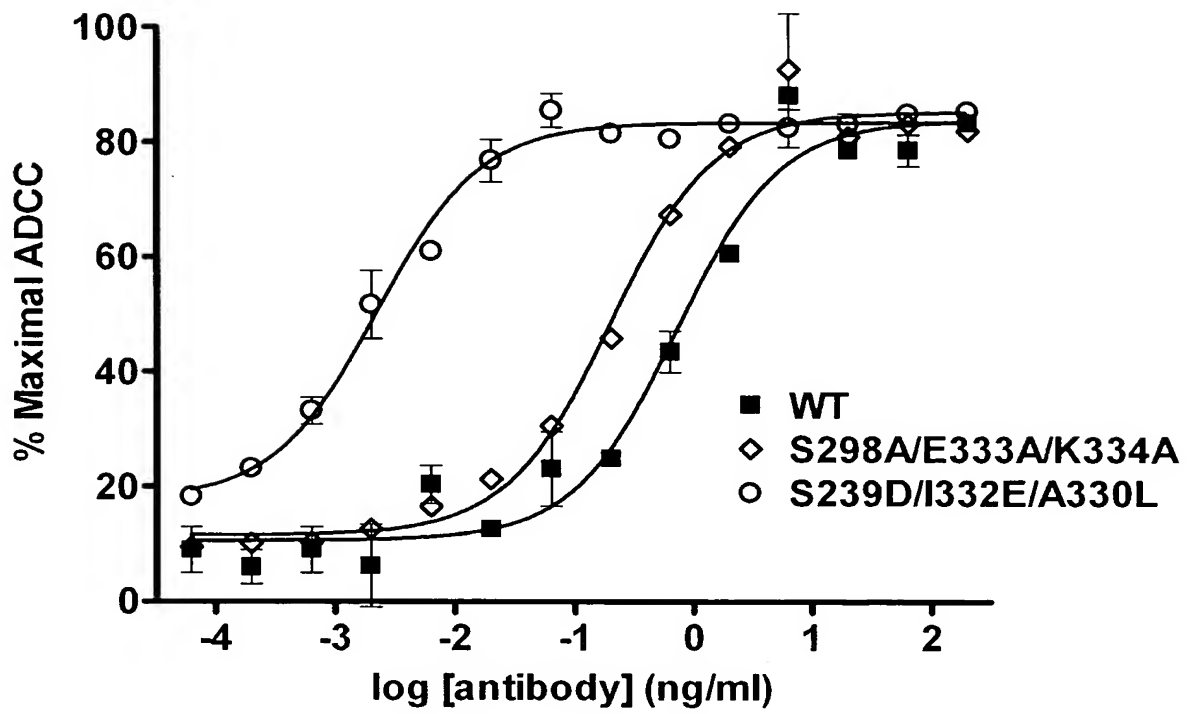


Figure 26a

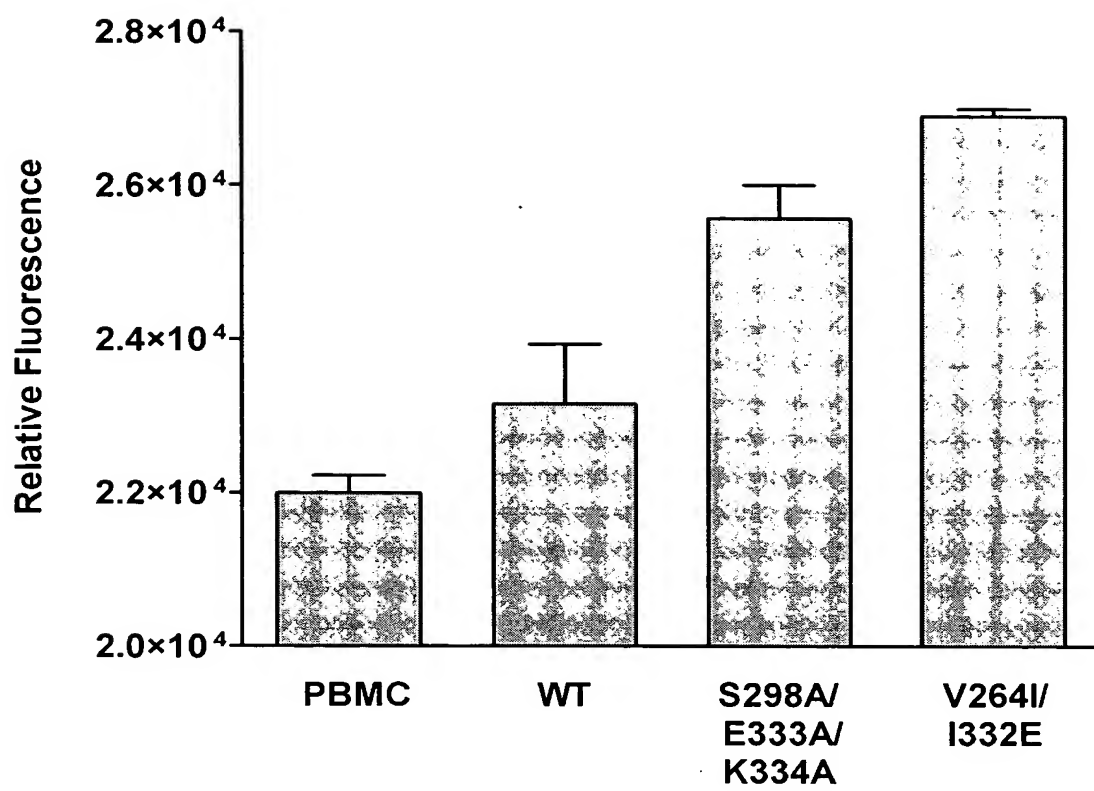


Figure 26b

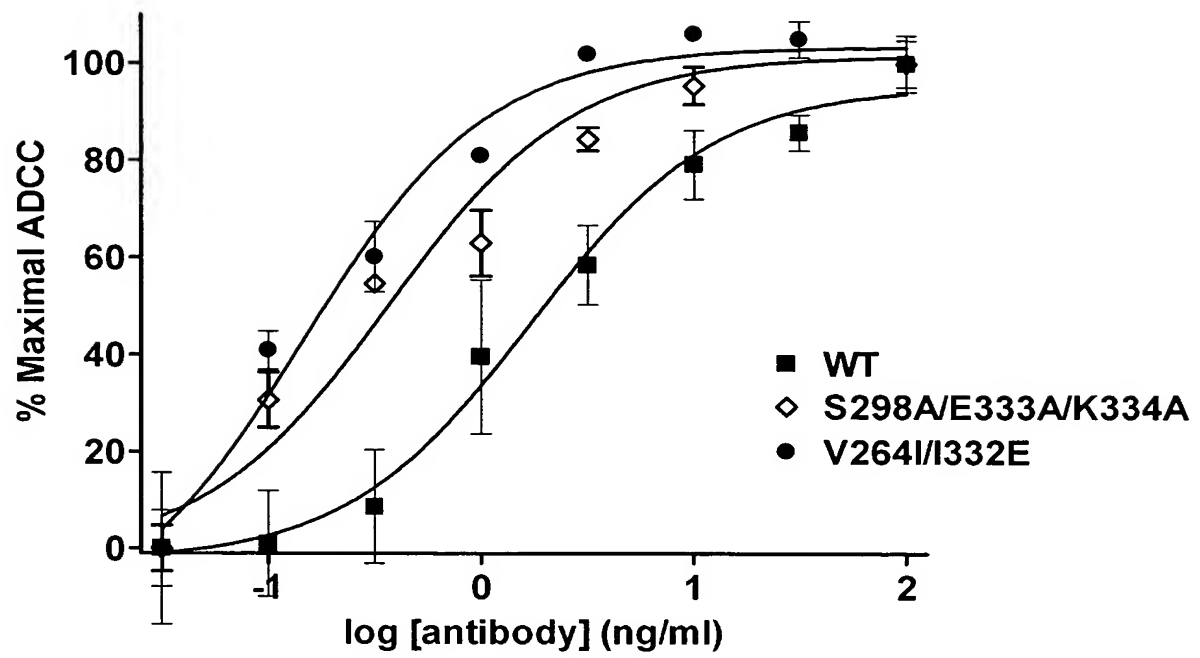


Figure 26c

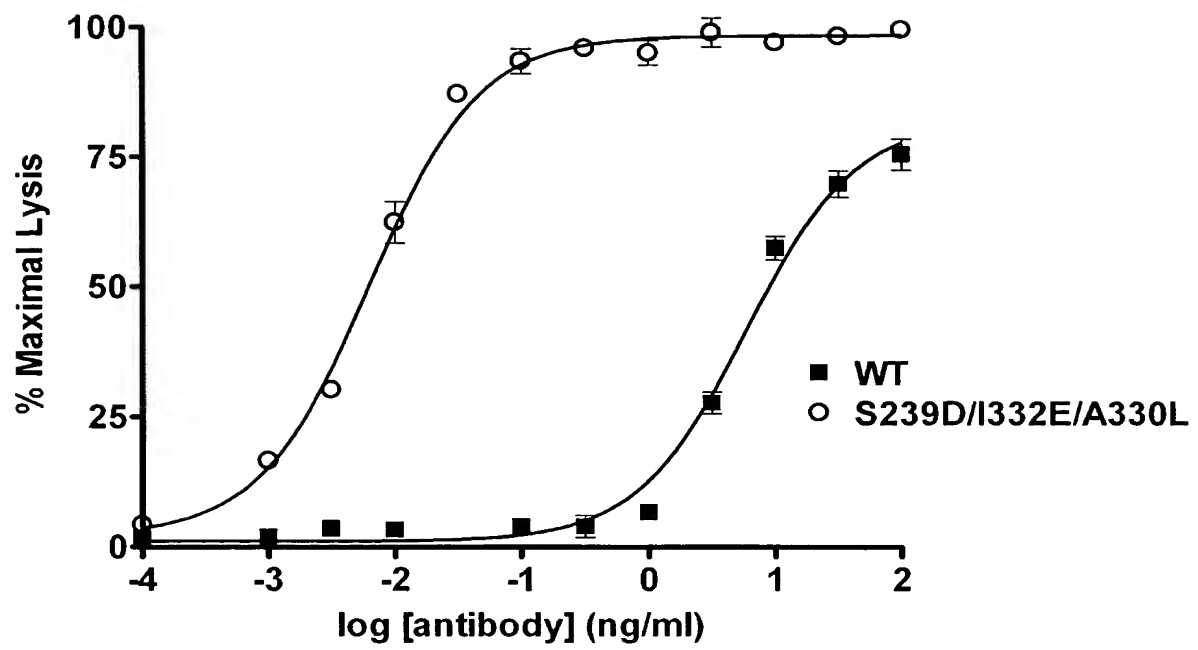


Figure 27a

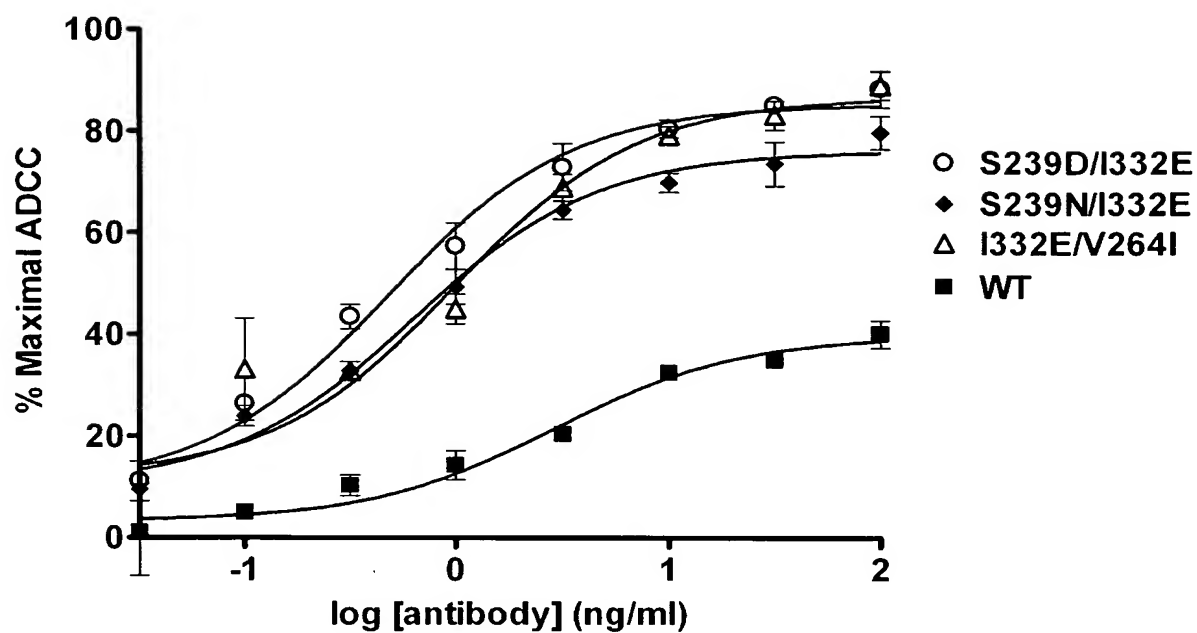


Figure 27b

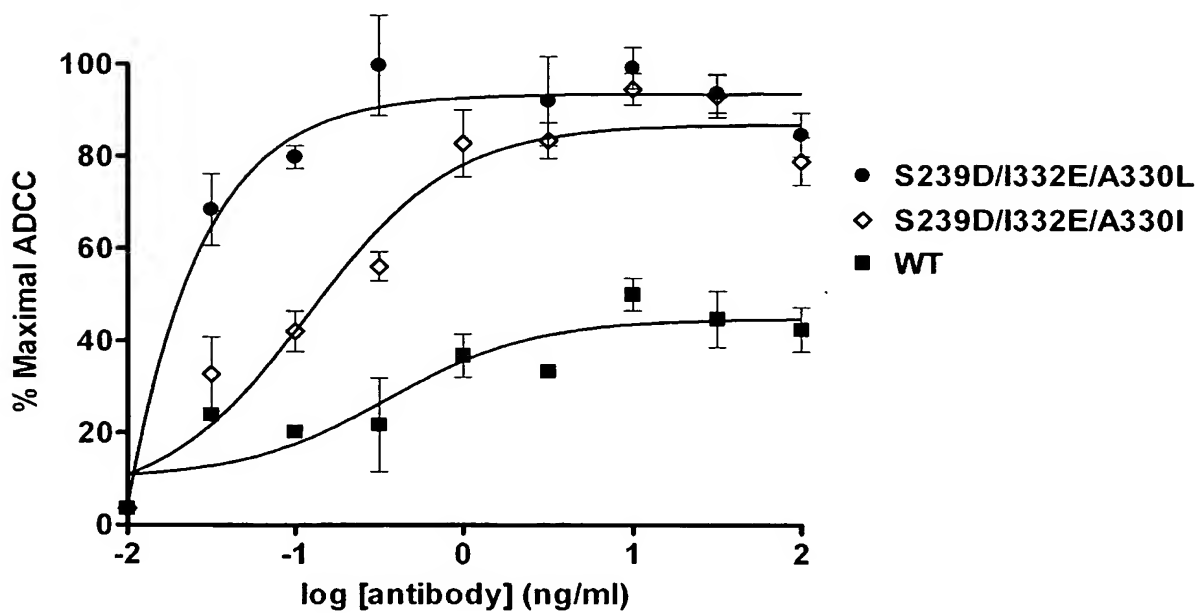


Figure 28

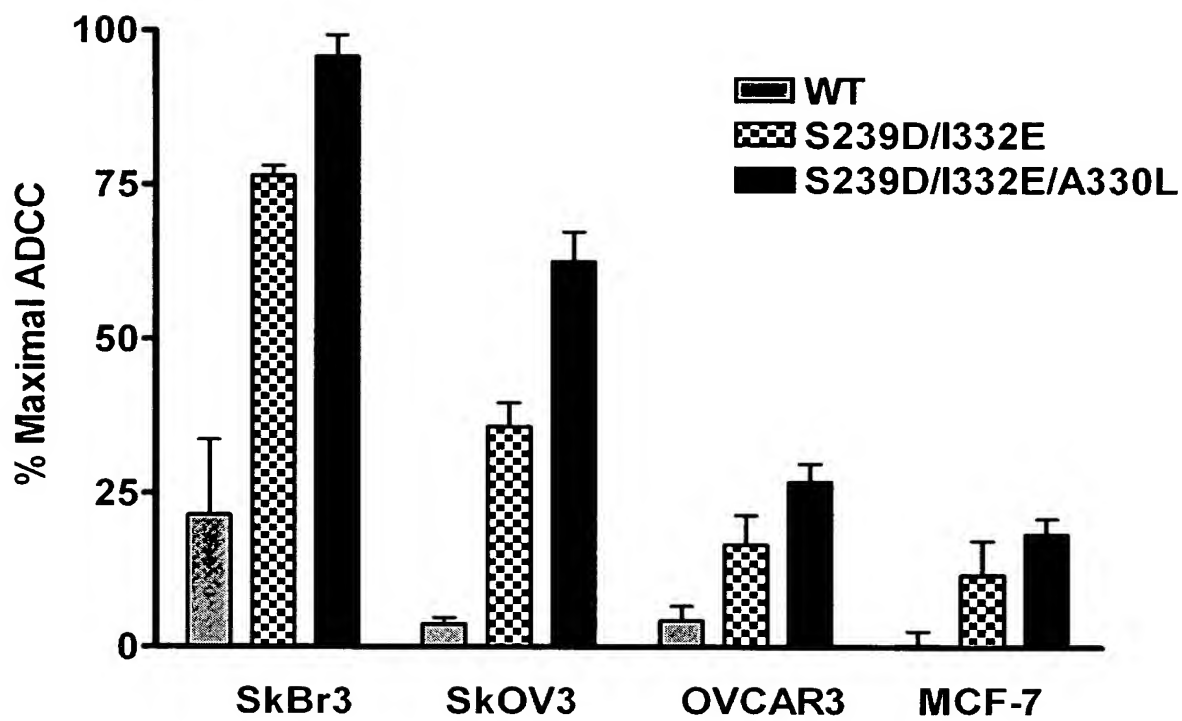


Figure 29

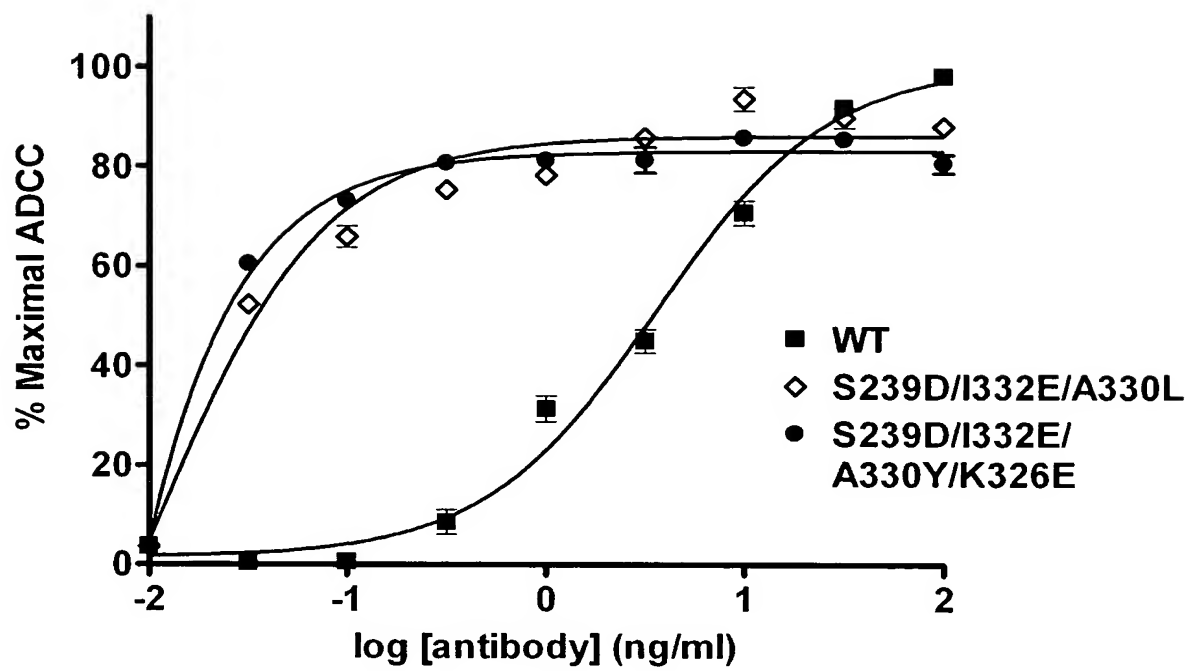


Figure 30

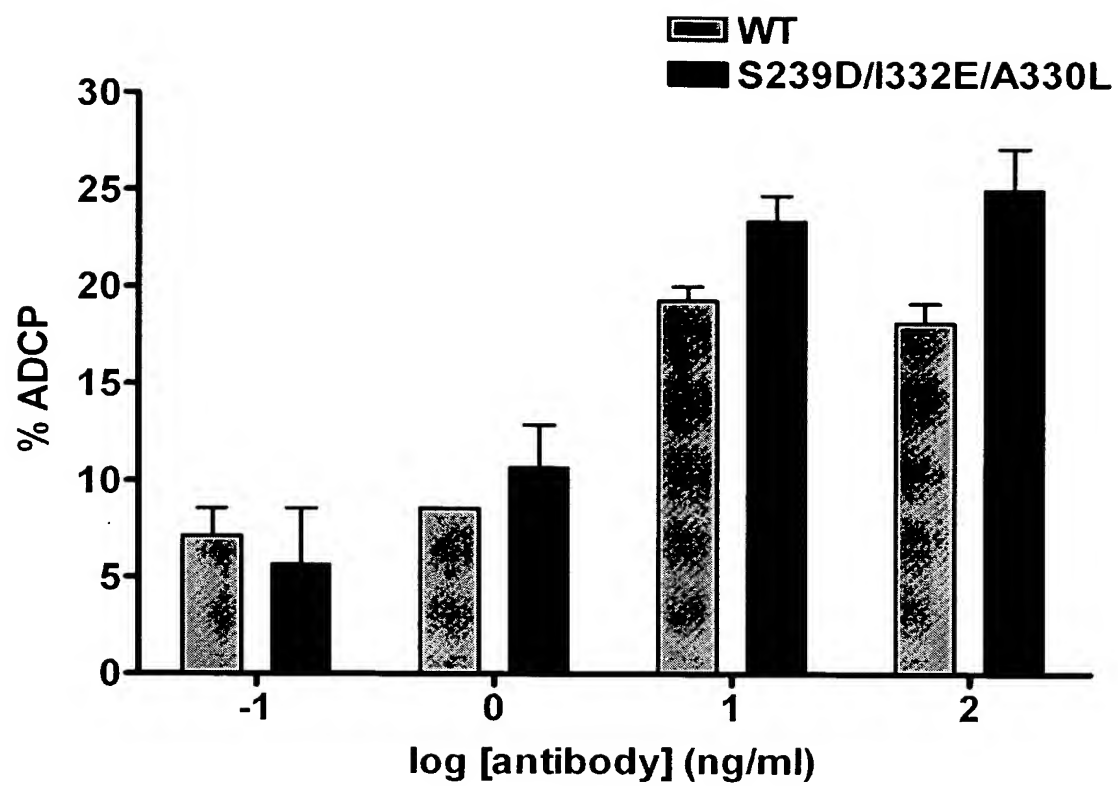


Figure 31a

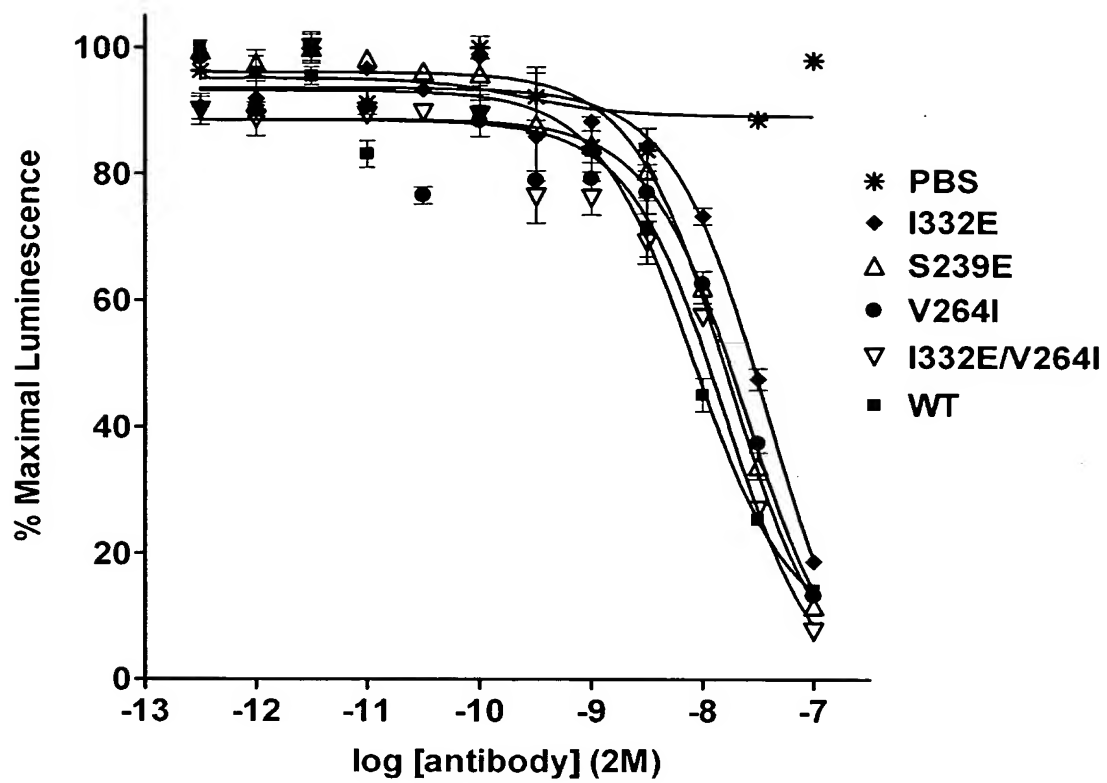


Figure 31b

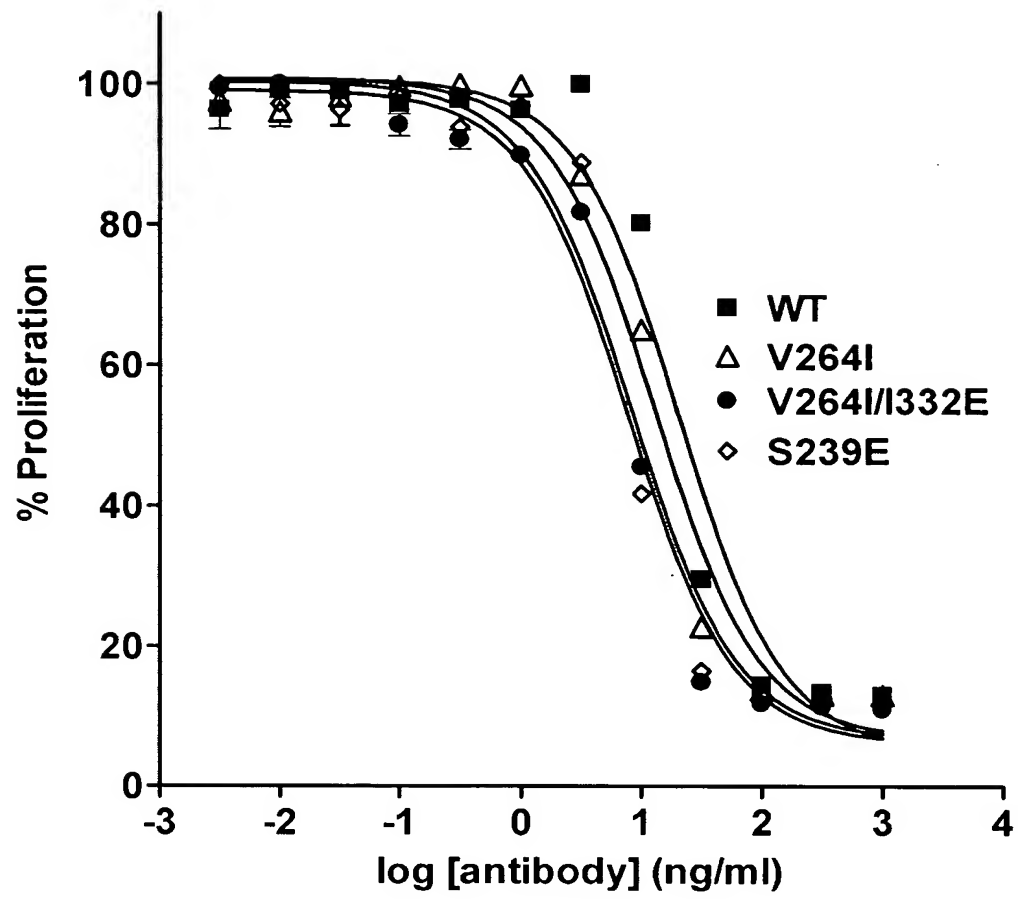


Figure 31c

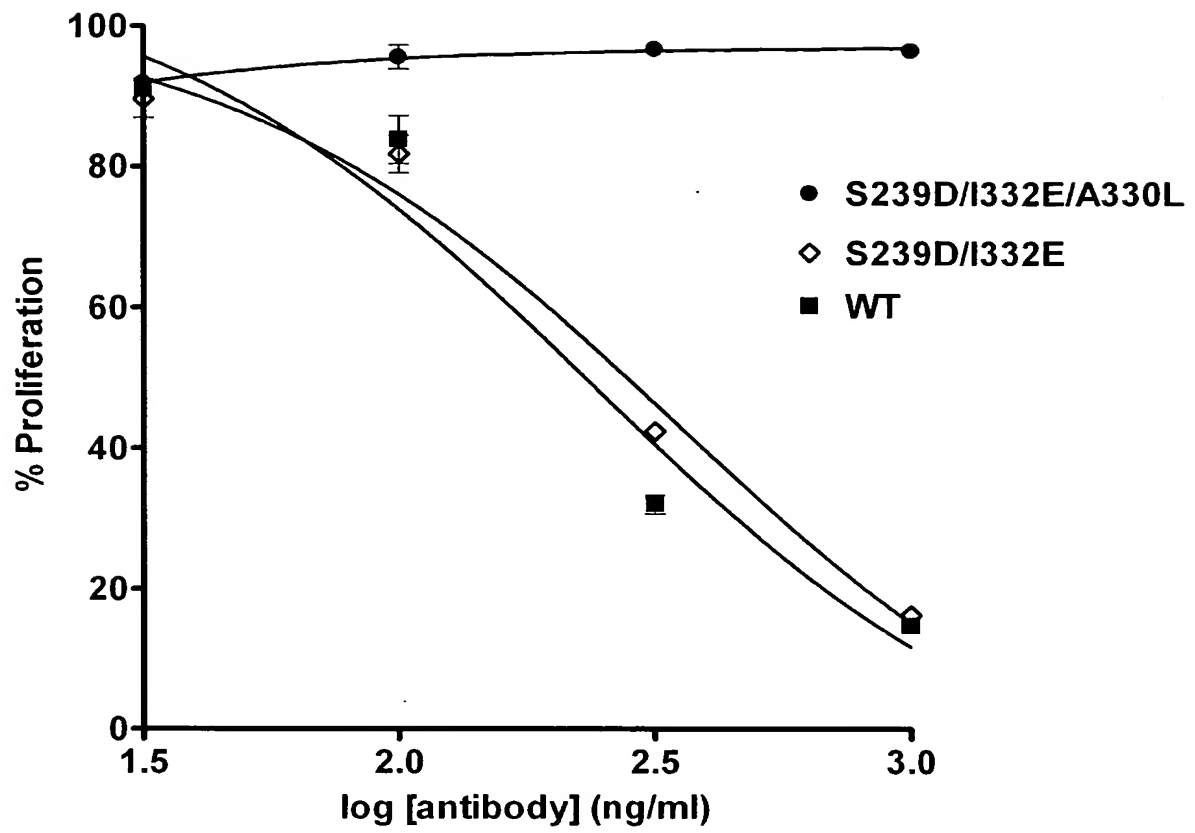


Figure 32

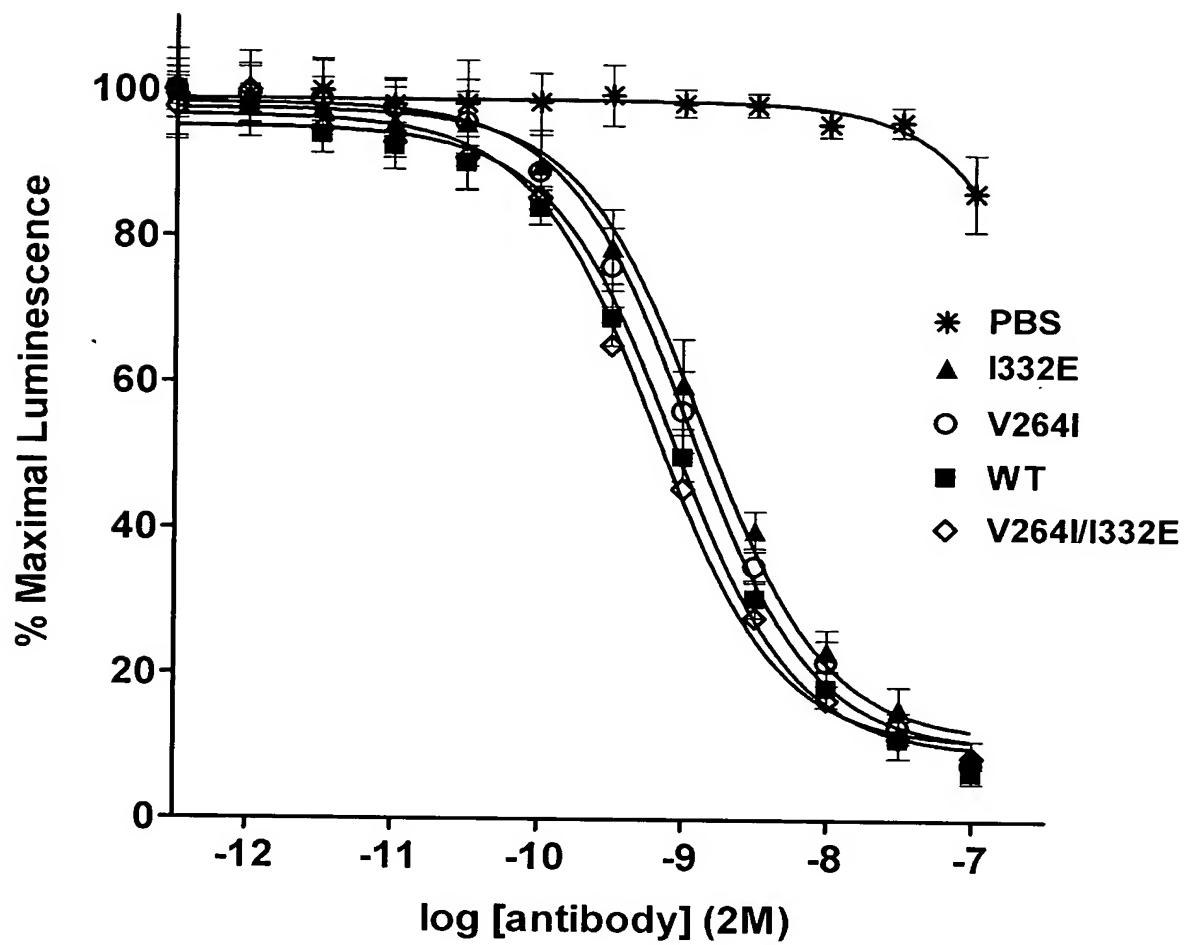


Figure 33

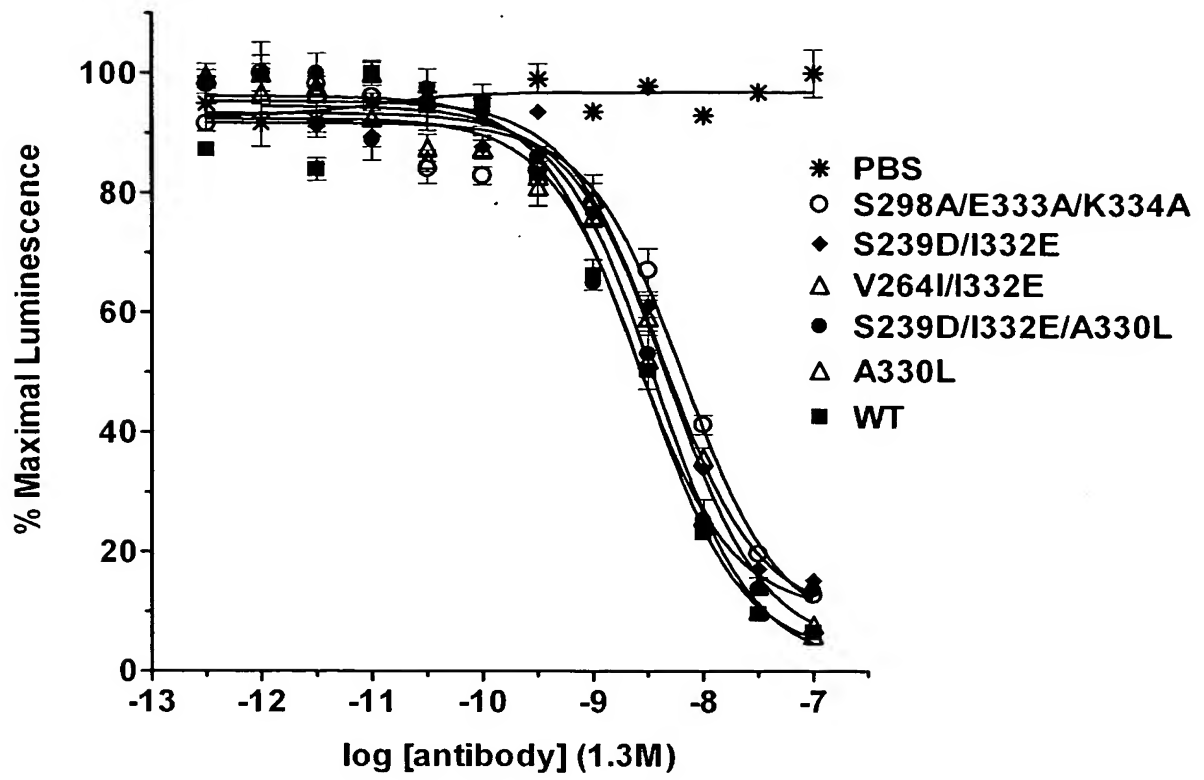


Figure 34a

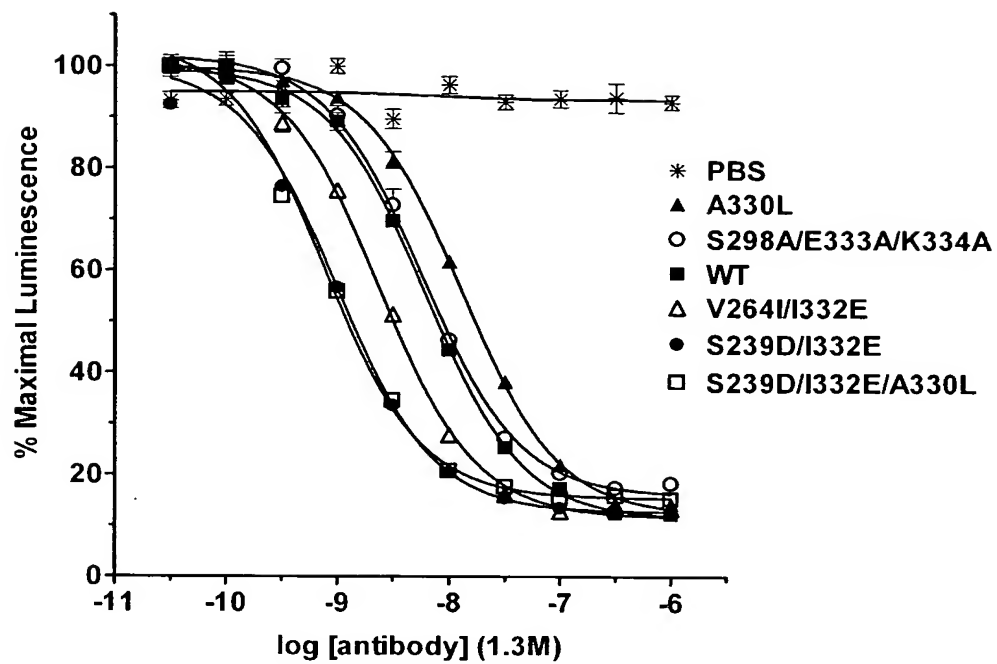


Figure 34b

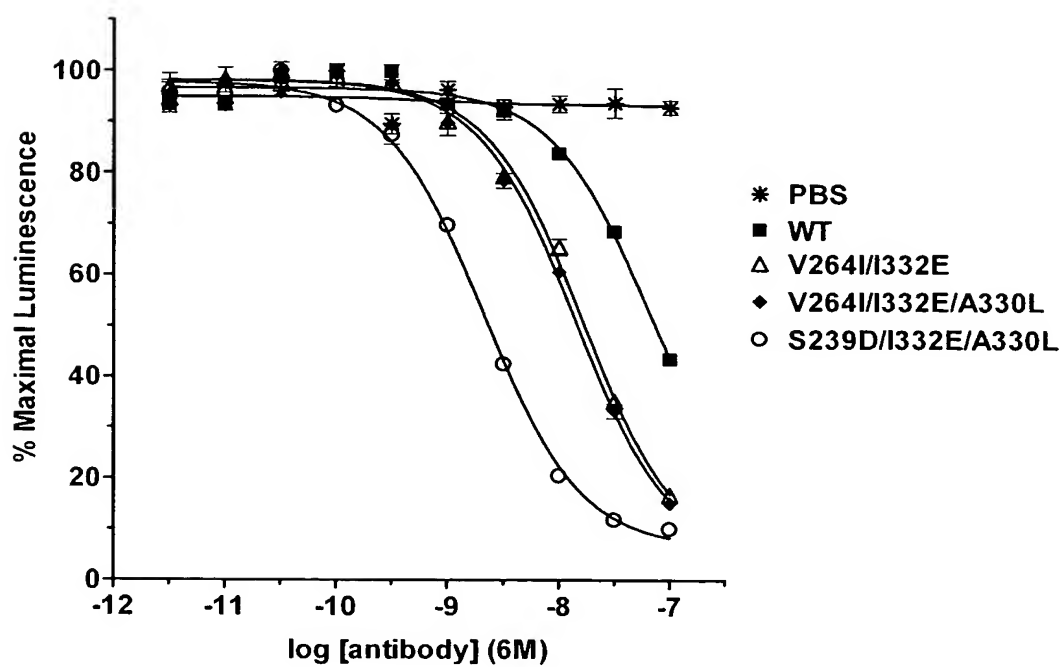


Figure 35

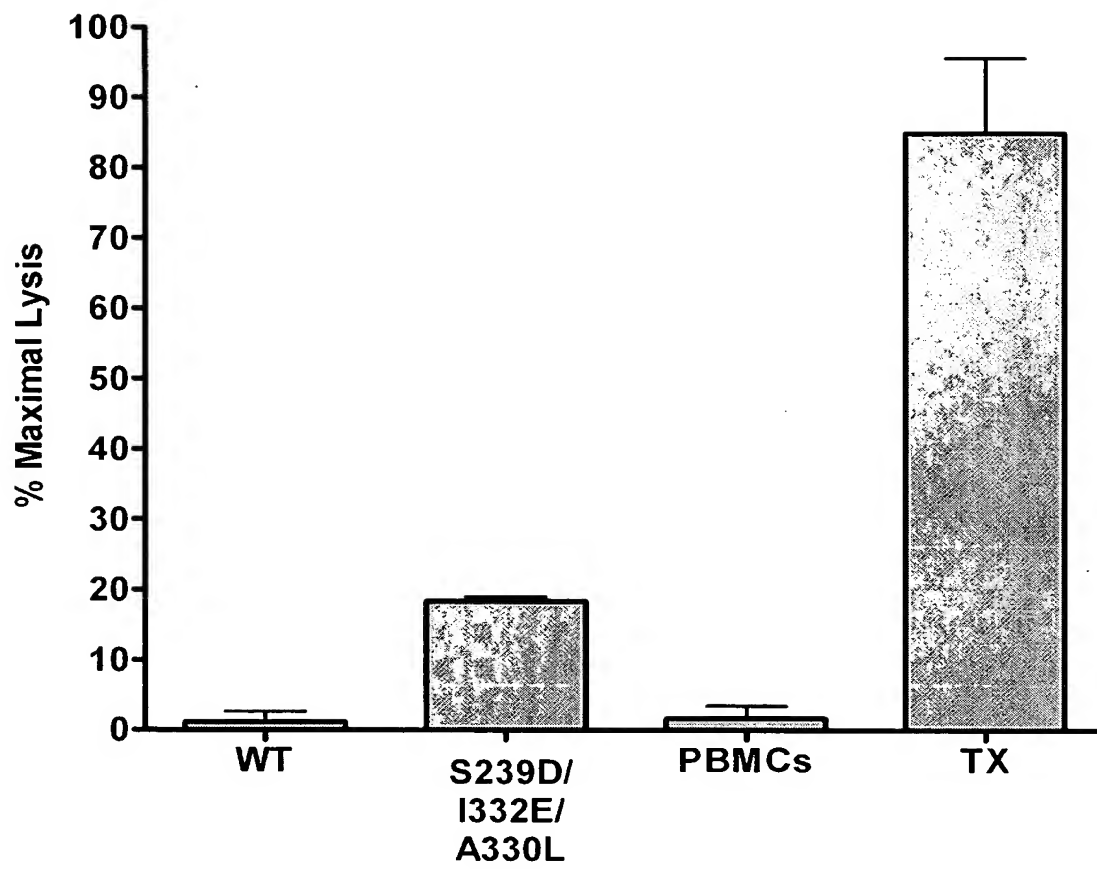


Figure 36

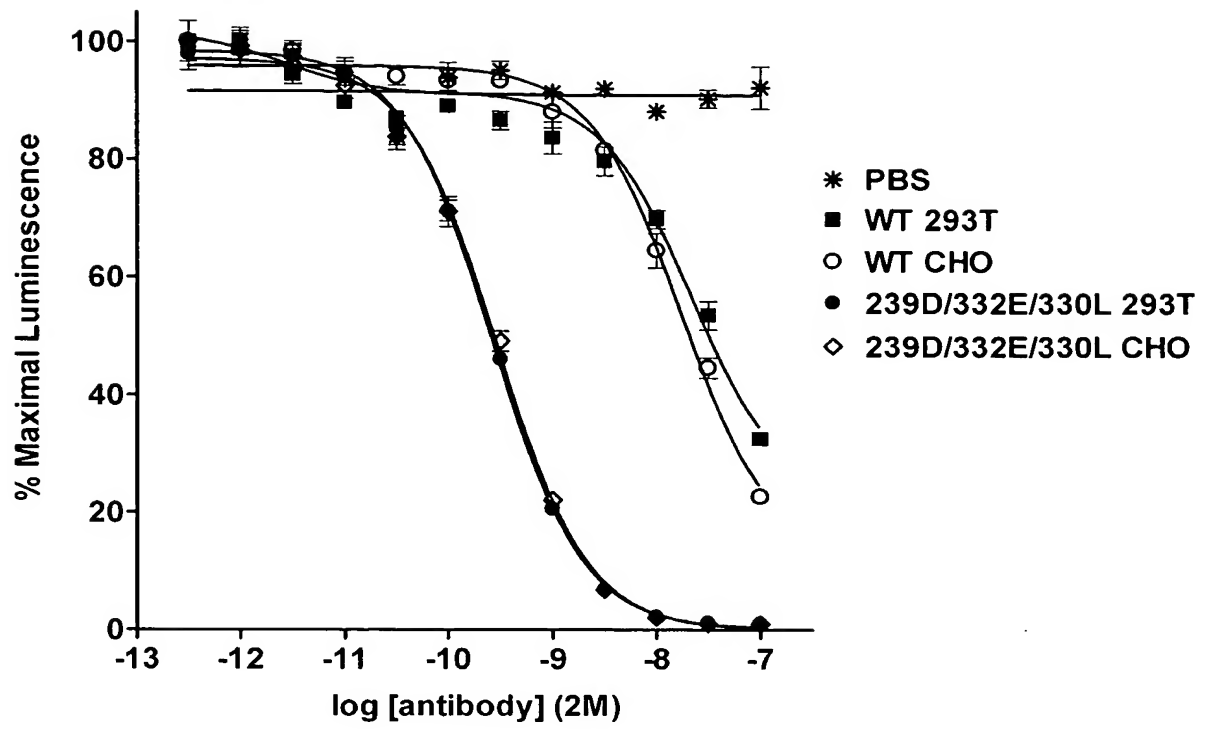


Figure 37a

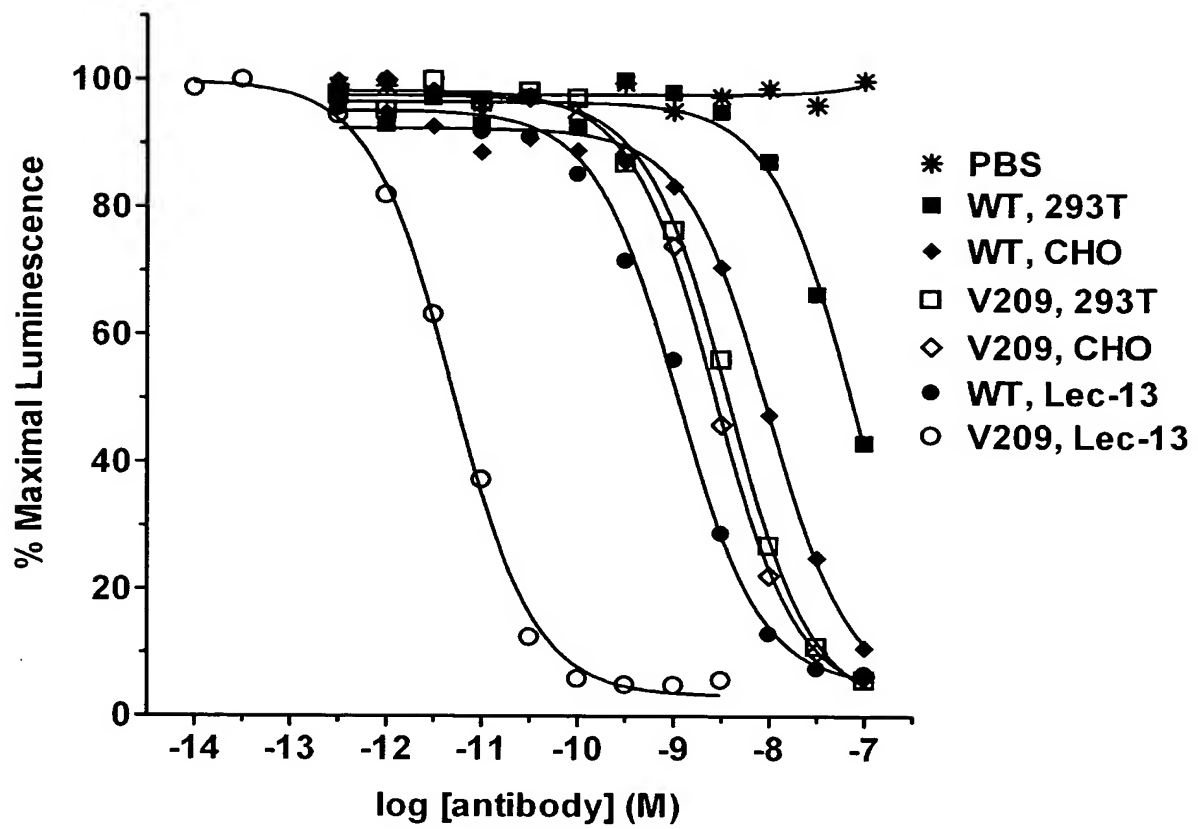


Figure 37b

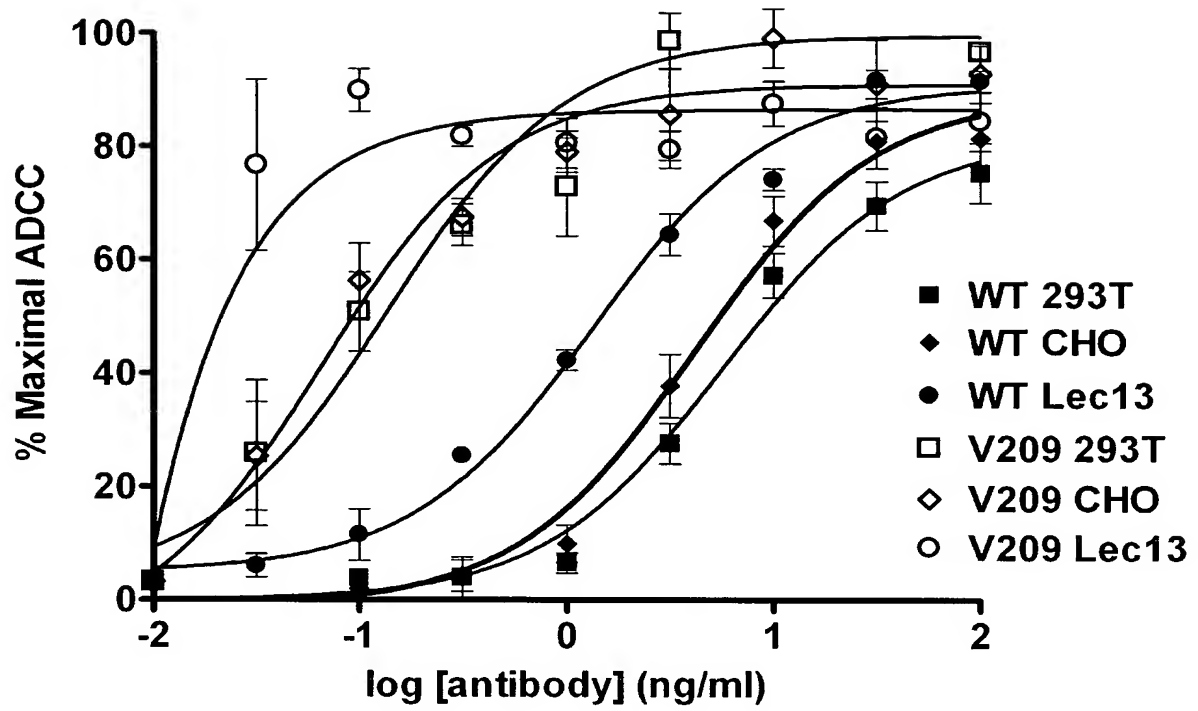


Figure 38a

Anti-CD20 light chain

QIVLSQSPAILSASPGEKVTMTCRASSSVSYIHWFQQKPGSSPKPWYATSNLASGVPVRFSGSGSG
TSYSLTISRVEAEDAATYYCQQWTSNPPTFGGGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLL
NNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDYSLSSLTLSKADYEKHKVYACEVTHQGLS
SPVTKSFNRGEC

Figure 38b

Anti-CD20 heavy chain

QVQLQQPGAELVKPGASVKMSCKASGYTFTSYNMHWVKQTPGRGLEWIGAIYPGNGDTSYNQKFK
GKATLTADKSSSTAYMQLSSLTSEDSAVYYCARSTYYGGDWYFNWVGAGTTVTVSAASTKGPSVFP
LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLG
TQTYICNVNHKPSNTKVDKKAEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCV
VVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKA
LPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTP
PVLDSDGSFFLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGK

Figure 37c

Anti-CD20 heavy chain comprising possible Fc variants

QVQLQQPGAELVKPGASVKMSCKASGYTFTSYNMHWVKQTPGRGLEWIGAIYPGNGDTSYNQKFK
GKATLTADKSSSTAYMQLSSLTSEDSAVYYCARSTYYGGDWYFNWVGAGTTVTVSAASTKGPSVFP
LAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLG
TQTYICNVNHKPSNTKVDKKAEPKSCDKTHTCPPCPAPELLGGPX₁X₂FLFPPKPKDTLMISRTPEVTC
VX₃DVSHEDPX₄VX₅FNWYVDGVEVHNAKTKPREEQYX₆Z₁TYRVVSVLTVLHQDWLNGKEYKCKVS
NZ₂ALPX₇PX₈EKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENN
YKTTTPVLDSDGSFFLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGK

Position	WT	Possible Substitutions
X ₁	S	D, E, N, Q, T
X ₂	V	I, M
X ₃	V	I, T, Y
X ₄	E	Y
X ₅	K	E
X ₆	N	D
X ₇	A	Y, L, I
X ₈	I	D, E, N, Q
Z ₁	S	A
Z ₂	K	E, T